EH1116H-4 Nano

16CH Embedded Hybrid DVR

User's Manual

Oct. 2011

FCC NOTICE (Class A)

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Federal Communications Commission Statement

NOTE- This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by tuning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/television technician for help.

Class A ITE

Class A ITE is a category of all other ITE which satisfies the class A ITE limits but not the class B ITE limits. Such equipment should not be restricted in its sale but the following warning shall be included in the instructions for use:

Warning -This is a class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

European Community Compliance Statement (Class A)

This product is herewith confirmed to comply with the requirements set out in the Council Directives on the Approximation of the laws of the Member States relating to Electromagnetic Compatibility Directive 2004/108/EEC.

Warning - This is a Class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures to correct this interference.

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Battery Safety Information

- Store the batteries in a cool dry place.
- Do not dispose of used batteries in domestic waste. Dispose of batteries at special collection points or return to point of sale if applies.
- Remove the batteries during long periods of non-use. Always remove exhausted batteries from the remote control. Battery leakage and corrosion can damage this remote control, dispose of batteries safely.
- Do not mix old and new batteries.
- Do not mix different types of batteries: alkaline, standard (carbon-zinc) or rechargeable (nickel-cadmium).
- Do not dispose of batteries in a fire. The batteries may explode or leak.
- Never short circuit the battery terminals.

WARNING

TO REDUCE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE

CAUTION

IF THERE IS ANY DAMAGE, SHORTAGE OR INAPPROPRIATE ITEM IN THE PACKAGE, PLEASE CONTACT WITH YOUR LOCAL DEALER. WARRANTY VOID FOR ANY UNAUTHORIZED PRODUCT MODIFICATION

NOTICE

- INFORMATION IN THIS DOCUMENT IS SUBJECT TO CHANGE WITHOUT NOTICE.
- THE INFORMATION CONTAINED HEREIN IS TO BE CONSIDERED FOR REFERENCE ONLY.

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Chapter 1 Introduction

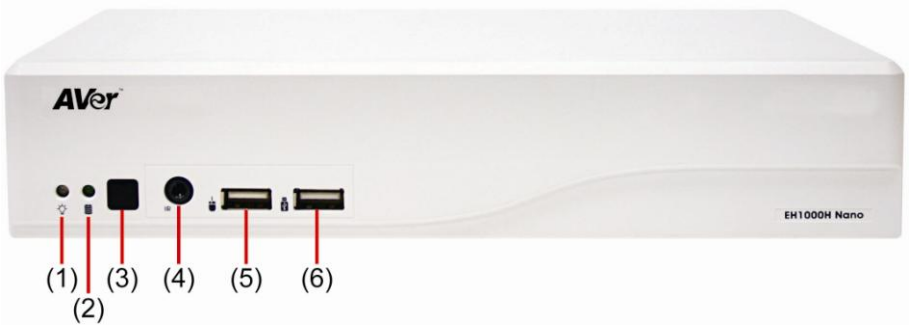
1.1 Package Content

- ☐ (1) EH1116H-4 Nano unit
- ☐ (2) Quick Installation Guide
- ☐ (3) Software CD (User's Manual is included)
- ☐ (4) Remote Control(Batteries are included)
- ☐ (5) Power adaptor
- ☐ (6) Power cable
  * The power cable may vary depending on the standard power outlet of the country where it is sold.
- ☐ (7) Screws for HDD installation
- ☐ (8) DVI cable

1.1.1 Optional Accessories

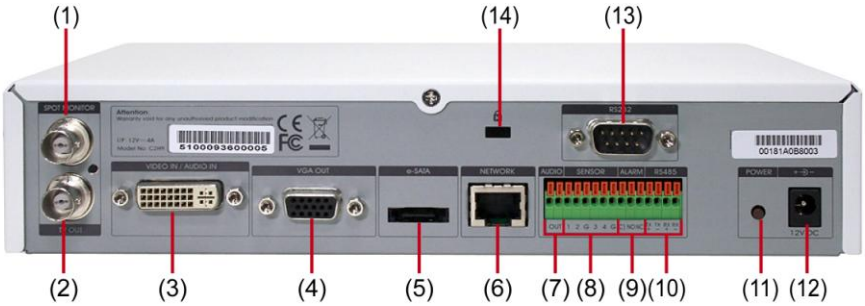
IR extended cable

1.2 Front Panel



Name	Function
(1) System Power indicator	System power status indicators. Lights when the system is running.
(2) Record indicator	When DVR system is recording, the light will keep flashing.
(3) IR Sensor	Receive signal from the remote control to operate the DVR unit
(4) IR Sensor port	For extended IR sensor cable(optional)
(5) USB port(mouse)	For USB mouse connection.
(6) USB port	For connecting USB device, ex: USB pen drive, external hard disk, mouse…and so on. The USB backup device must be in FAT32 format.

1.3 Back Panel



Name	Function
(1) Spot Monitor	Outputs the analog video signals to SPOT monitor when receive the alarm events.
(2) TV Output	Outputs the video signals to a TV monitor.
(3) Video Input	Input the video camera signal (Channel1~16).
(4) VGA Output	Outputs the camera video signal to a LCD monitor.
(5) eSATA port	For connecting with eSATA RAID.
(6) LAN Port	Ethernet connection wit10/100Mbps.
(7) Audio Out	Output audio signal to audio output device such as microphone or speaker. - Audio output: 1 channel

The audio output device has its own power supply is necessary.

(8) Sensor In	Support up to 4 sensor devices.
(9) Relay Out	Support 1 relay device.
(10)RS485	For PTZ camera connection (also see Chapter 1.5).
(11)Power button	Press it to power on the DVR unit.
(12)12V DC connector	For connecting the power cord.
(13)RS232 port	For POS device connection.
(14)Anchoring port	For anchoring the DVR to avoid theft.

1.4 Setting Up the DVR Unit

1.4.1 Installing the Hard Disk

The external USB hard disk only supports on file backup. Please **do not** use the external USB hard disk for recording purpose.

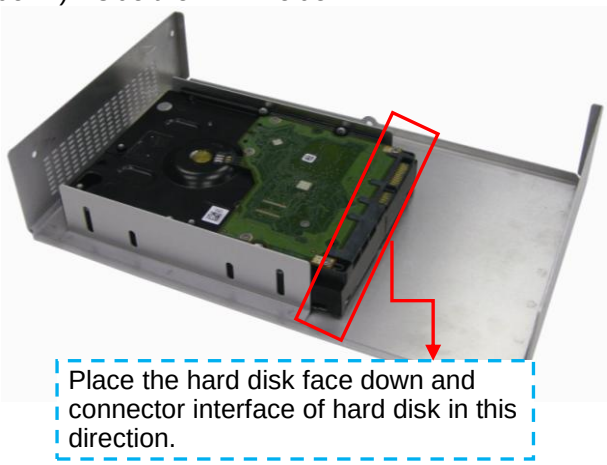
User can install 1 SATA hard disks inside the DVR unit.

Follow the illustrated instructions below to install the hard disk:

1. Loosen all screws(2 sides and rear side)

2. Push the cover backward and lift. The cover is a little bit tight, please be carefully the hands.

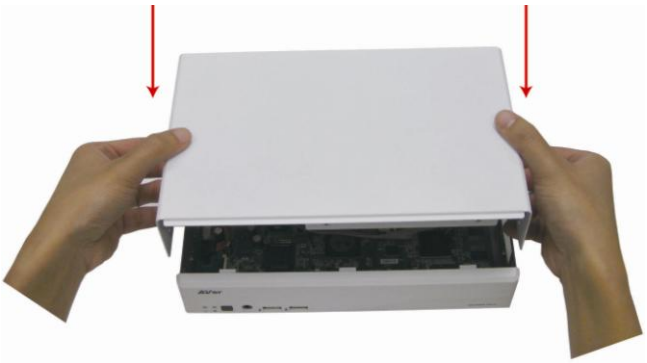
3. Turn the cover over and place the SATA hard disk (face down) inside the HDD holder.



4. Screw the hard disk(both side)

5. Hold the cover and connect the power cable and SATA cable to the hard disk.

6. Then, turn the cover over carefully. Hold the cover parallel with DVR unit and put the cover back to the DVR unit and be carefully the hard disk that inside the cover.



7. Finally, Push the cover forward and secure the cover

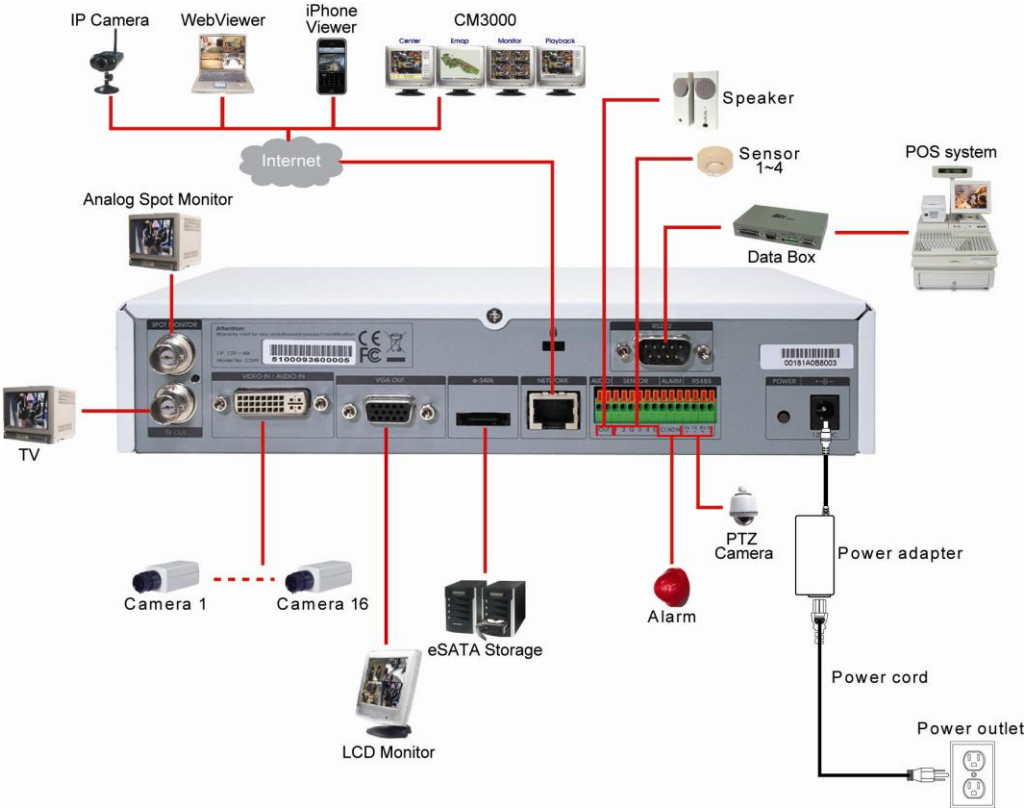
1.4.2 Connecting Devices

Pen drive and external hard disk must be FAT32 format.

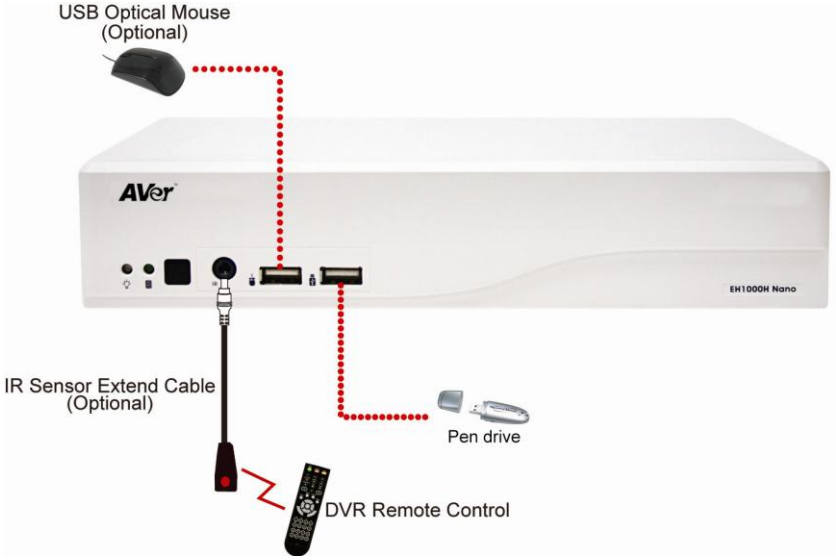
- All connected devices have its own power supply is necessary.
- 1.3 MP with H.264/MPEG4/ MJPEG on the first 4 channels and 2.3MP with MJPEG on the 1st channel for IP cam connection.
- EH1116H-4 Nano supports IP camera in first 4 channels.

The back panel of the DVR unit, user can connect up to 16 cameras in combination of analog and IP camera. The DVR unit also can connect 4 sensor devices, 1 alarm devices, and output video to a LCD monitor.

Follow the illustration below to make the connection:

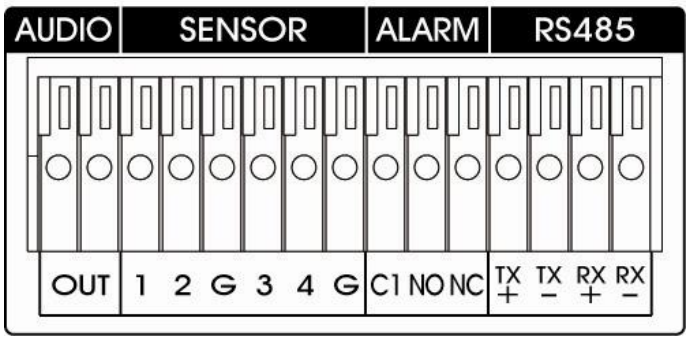


For backup recorded video, plugging the pen drive or external hard disk through USB port that are located at front panel of DVR unit, and then, use the bundled software enables user to transfer, playback and segment the video. Follow the illustration below to make the connection:



1.5 Audio, Sensor, Relay and RS485 pinhole allocation

The Sensor and Alarm enable you to connect 4 sensor inputs, 1 relay outputs and PTZ cameras. Just connect the external sensor, relay, and PTZ camera pin directly to the pinhole. Check the table below and locate which pinhole is assigned to sensor input and relay output.



1.5.1 Audio Out Pin Definition

Pin#	Definition
OUT	Audio out signal

1.5.2 Sensor Pin Definition

Sensor Pin #	Definition
1	Sensor 1 signal
2	Sensor 2 signal
G	Sensor ground
3	Sensor 3 signal
4	Sensor 4 signal
G	Sensor ground

1.5.3 Relay Pin Definition

Relay Pin #	Definition
C1	Relay Common 1
NO	Relay Normal Open
NC	Relay Normal Close

1.5.4 RS485 Pin Definition

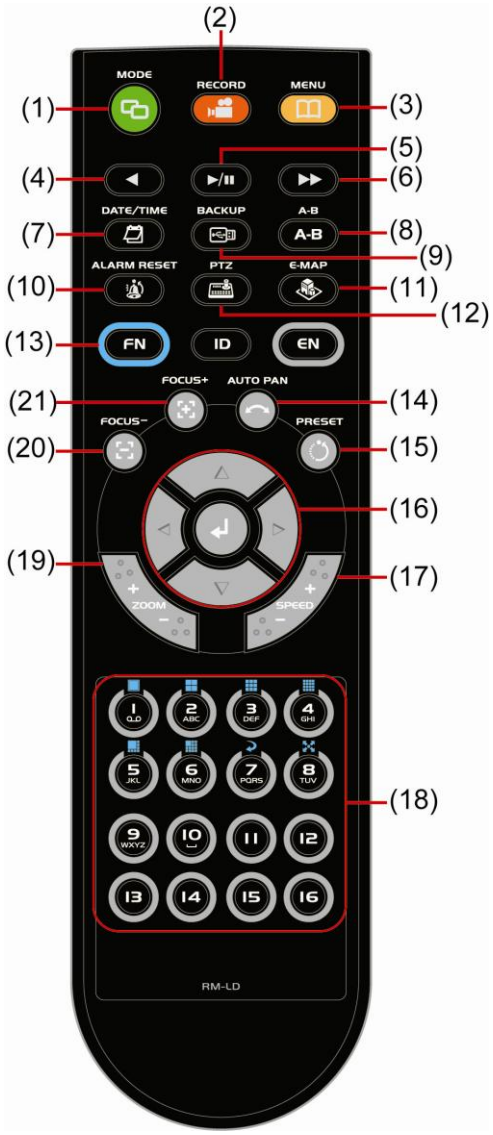
When connect PTZ camera through RS485 interface, please refer to the following pin definition to connect the DVR and PTZ.

Pin #	DVR site	PTZ site
TX+	RS485 TX+ signal	RS485 RX+ signal
TX-	RS485 TX- signal	RS485 RX- signal
RX+	RS485 RX+ signal	RS485 TX+ signal
RX-	RS485 RX- signal	RS485 TX- signal

If user uses the 2 wires for the PTZ camera connection, please connect to the RS-485 TX+ and TX- of the DVR site.

1.6 Familiarizing the Remote Control Buttons

Use the Remote control to operate the DVR unit.



Name	Function
(1)	Switch to playback mode
(2)	Start/stop recording video. To stop recording, the authentication password is required.
(3)	To call out system setup menu.
(4)	To rewind the recorded video.
(5)	To start playback. To pause playback.
(6)	To playback video at faster speed (1x ~ 32x).
(7)	To select the time and date of playback file.
(8) A-B	Set a playing recorded video from A point to B point segment and repeat playing on surveillance screen
(9)	To backup recorded video file to USB pen drive.
(10)	To reset alarm status.
(11)	Switch to Emap mode.
(12)	Call out PTZ control panel. Press again will close the PTZ control panel.

Name	Function
(13) FN	Press FN to enable FN modes (The word "**Fn+**" will show up in the left bottom corner on screen). To exit FN modes, press FN again. FN + 1 : Switch to single screen display mode FN + 2 : Switch to QUAD display mode FN + 3 : Switch to 9 spilt screen display mode FN + 5 : Switch to one single and 7 + 1 spilt screen display mode FN + 7 : Enable/disable auto scan

Name	Function
(13) FN	FN + 8 TUV : Switch to full screen
	The FN + 4 GHI, 6 MNO, 9 WXYZ ~ 16 don't have any functions.
(14)	To enable auto pan function.
(15)	To move the PTZ camera to the preset position. Press button and the "**PS+**" will show up on screen. And then, press preset position number button (1 ~ 16).
(16)	To move PTZ camera to left. To move the mouse cursor to left. To move PTZ camera to right. To move the mouse cursor to right.
(16)	To move PTZ camera lens up To move the mouse cursor up. To move PTZ camera lens down To move the mouse cursor down. Confirm or make a selection
(17)	Speed + : To speed up movement of PTZ camera lens
	Speed - :To speed down movement of PTZ camera lens
(18)	1 ~ 16 — 1 ~ 10 as number 1, 2, 3, 4, 5, 6, 7, 8, 9, and 0. 11 : ! 14 : $ 12 : @ 15 : % 13 : # 16 : ^
	1 ~ 8 TUV — Channel camera selection number in playback and preview mode.
	+ 1 ~ 16 — As a preset position in PTZ control mode.
	FN + 1 ~ 8 TUV — With FN button can switch to different screen display modes and enable auto scan and full screen.
(19)	Zoom + : To zoom in view of PTZ camera
	Zoom - :To zoom out view of PTZ camera
(20)	To focus out PTZ camera lens

Name	Function
(21)	To focus in PTZ camera lens

The EN and ID button doesn’t support at this version.

Chapter 2 Using the DVR Software

2.1 First Time Using the DVR Unit

1. Connect the mouse to DVR unit (through USB port).
2. Connect all necessary external devices.

DVR unit doesn't supply the power to connected external devices.

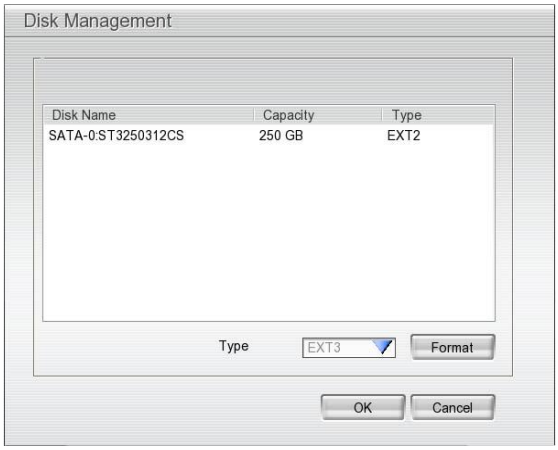
3. Plug the power to turn on the DVR unit.
4. Please wait for a while until start up process is completed. And then, the preview screen will show up on surveillance screen.

5. **Format hard disk:** If the hard disk is first time installed in the DVR unit, please format the hard disk. Following the below steps to format the hard disk.

- Before formatting hard disk, please stop recording.
- While formatting hard disk, the CPU usage will be near to 100% and might slow down the DVR system response.

a. Click **Setup** and enter the password (If this is the first time, enter the default password [**admin**]. The default ID [**admin]**).

b. Click **System** → **Add**



c. Select the hard disk from list.
d. Click **Format** button and click **Start** to begin formatting
e. When formatting is done, click **OK**.

6. **Adjust time and date:** Setup the DVR system date and time in order to have correct recording time and date. Following the below steps to setup date and time:
   a. Click **Setup** and enter the password (If this is the first time, enter the default password [**admin**]. The default ID [**admin**]).
   b. Select **System**.
   c. In **Date and Time Setting**, click **Setting** button of **System Date and Time**.
   d. Select the Year and Month by click arrow button, click on the date to select the date. And adjust the time, and then, click **OK**.
7. **Connecting the cameras:** DVR supports IP and Analog camera.

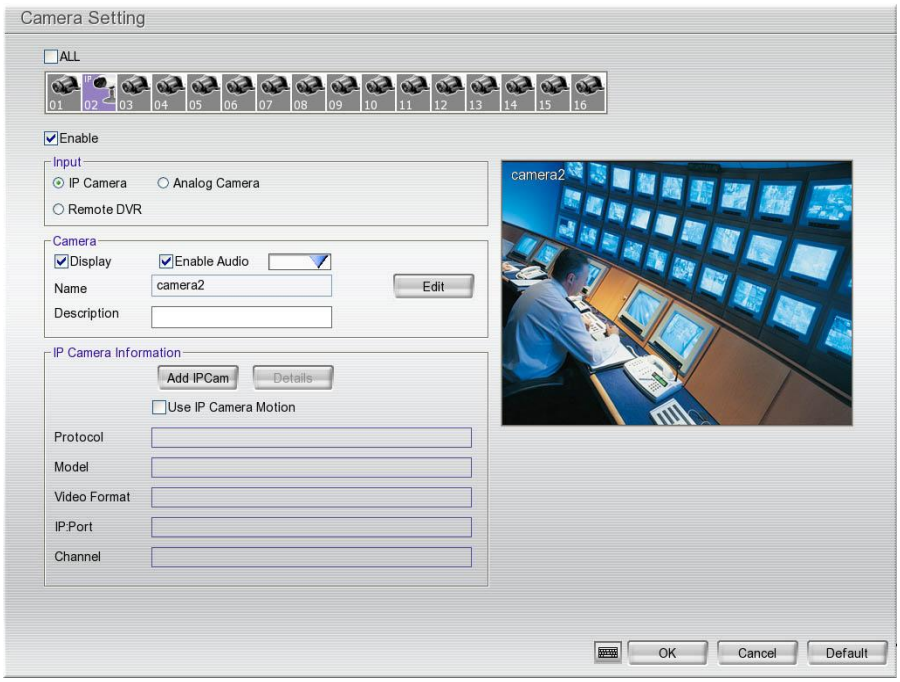
■ **Analog camera**

a. Connect the analog camera video cable to video cable.
b. Click **Setup** → **Camera**
c. Select camera channel and mark **Enable** to enable the channel.
d. Select **Input** as Analog Camera.
e. In **Camera** section, mark **Display** to allow the live video of camera to display on surveillance screen. And then, enter the **Name** and **Description** of the channel. Mark **Enable Audio** will allow recording the sound that received from selected audio input channel (audio input channel located on back panel of DVR). For example: user has enabled audio and select audio input channel 1 on the camera 4. Therefore, DVR will record the video of camera 4 and sound that received from audio input channel 1 together. While playback, user will hear sound that received by audio input channel 1 on camera 4.
f. Adjust the bright, contrast, hue, and saturation of the camera.
g. Click **OK**.

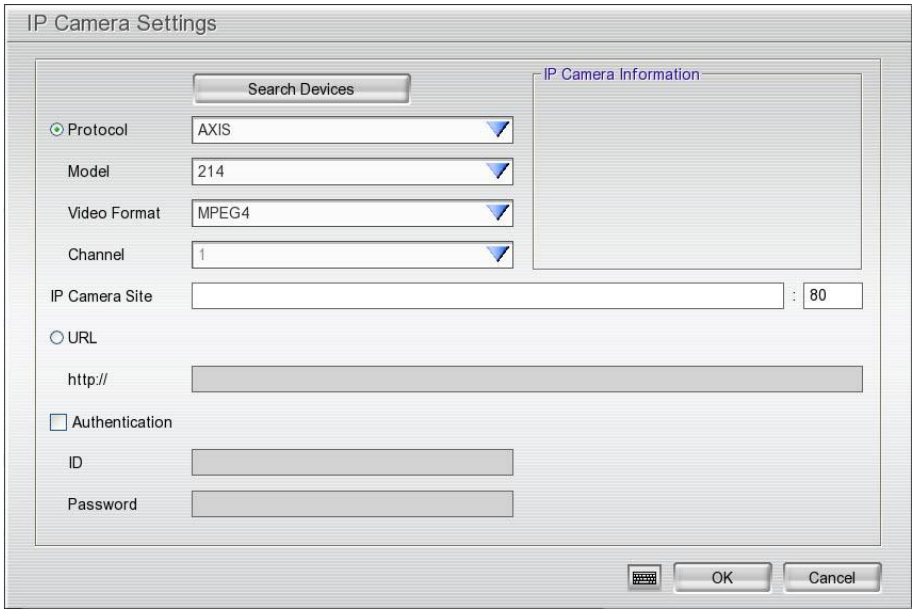
■ **IP camera**

- EH1116H-4 Nano only supports first 4 channels (CH1~4) for IP camera.
- 1.3 MP with H.264/MPEG4/ MJPEG on the first 4 channels and 2.3MP with MJPEG on the 1st channel for IP cam connection.

a. Click **Setup** → **Camera**.



b. Select camera channel (1~4) and mark **Enable** to enable the channel.
c. Select **Input** as IP Camera.
d. In **Camera** section, mark **Display** to allow the live video of camera to display on surveillance screen. Then, enter the **Name** and **Description** of the channel.
e. In **Camera Information** section, click **Add IPCam** for detail setting.

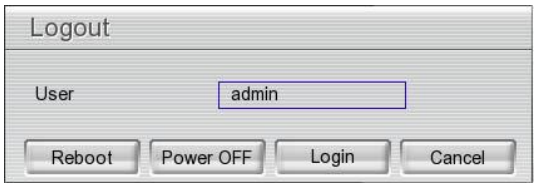


f. In **IP Camera Setting** window, click **Protocol** radio button, and then, select **Protocol**, **Mode**, and **Video Format**. User also can click **Search Devices** button to find the IP cameras that can be detected on your LAN network.
g. Enter IP address in **IP Camera site** column or enter the **URL** of IP camera.
h. Enable **Authentication** and enter **ID** and **password** if IP camera's access authority is required.
i. Click **OK** to save the setting.
j. When the IP camera has connected, user should see the camera information of **Protocol**, **Model**, **Video Format**, **IP port**, and **Channel**.
k. To connect another IP camera, follow the above steps.

2.1.2 Using the Virtual Keyboard

User can use the Virtual Keyboard when the keyboard is not available. Just click or right-click screen to call out the virtual keyboard. For uppercase, click **Caps** button. To exit, click **Esc**.

2.2 Familiarizing the Buttons in Preview Mode

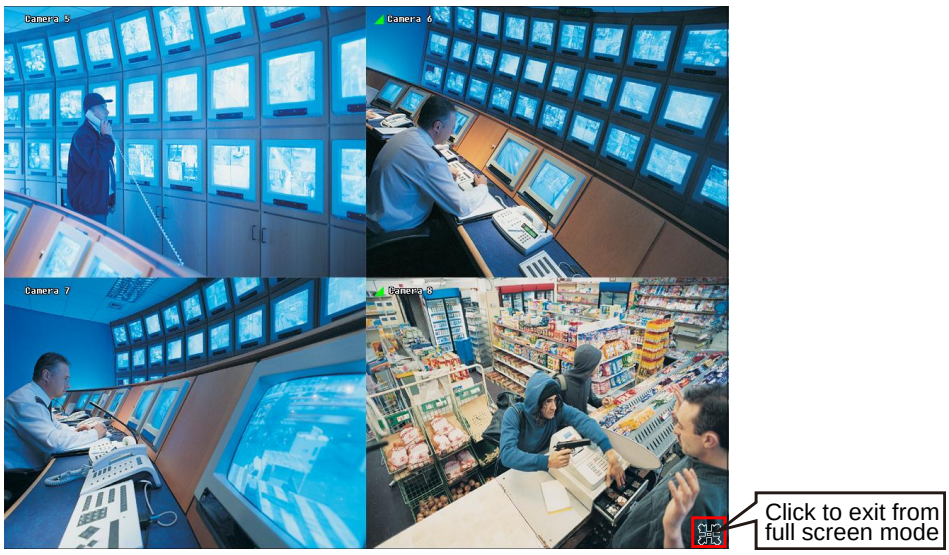
Name		Function
(1)	Logout	- **Reboot:** To restart the DVR system. It is required to enter the password - **Power Off:** To shut down the DVR system. It is required to enter the password - **Login:** Using different ID to login to DVR system. - **Cancel:** To return to DVR application. 
(2)	Split Screen Mode	Select from four (4) different split screen types to view all the camera, or one camera over the other or alongside on a single screen. It also allows you to switch and view different camera number.

- When you are in single screen mode, **Right click** and **Drag** a square on the area you want to enlarge. Right-click on screen again, the screen view will back to normal view.
- When you are in full screen mode, partial enlarges does not support.

(3)	Record	Start/stop video recording.
(4)	EMap	Display the map in each area, and the location of camera/ sensor/ relay and the warning (see also Chapter 2.2.1).
(5)	Network	Enable/disable remote system access. This feature allows you to access DVR server from a remote location via internet connection. The default is disabled.
(6)	Setup	Configure the system settings. (see also Chapter 3)
(7)	PTZ	Access PTZ control panel. (see also Chapter 2.2.2)
(8)	Preview	Switch to Preview mode. This allows you to view live camera display.

Name	Function
(9) Playback	Switch to Playback mode. This allows you to view the recorded video file. (see also Chapter 2.3)
(10) Status bar	Display the current date, time, hard disk free space and temperature of unit.
(11) Camera ID	Show the number of cameras that are being viewed. When you are in single screen mode, click the camera ID number to switch and view other camera.
(12) Snapshot	Capture and save the screen shot in *.jpg format.

Please plug the USB pen drive to DVR server before press **Snapshot** button.

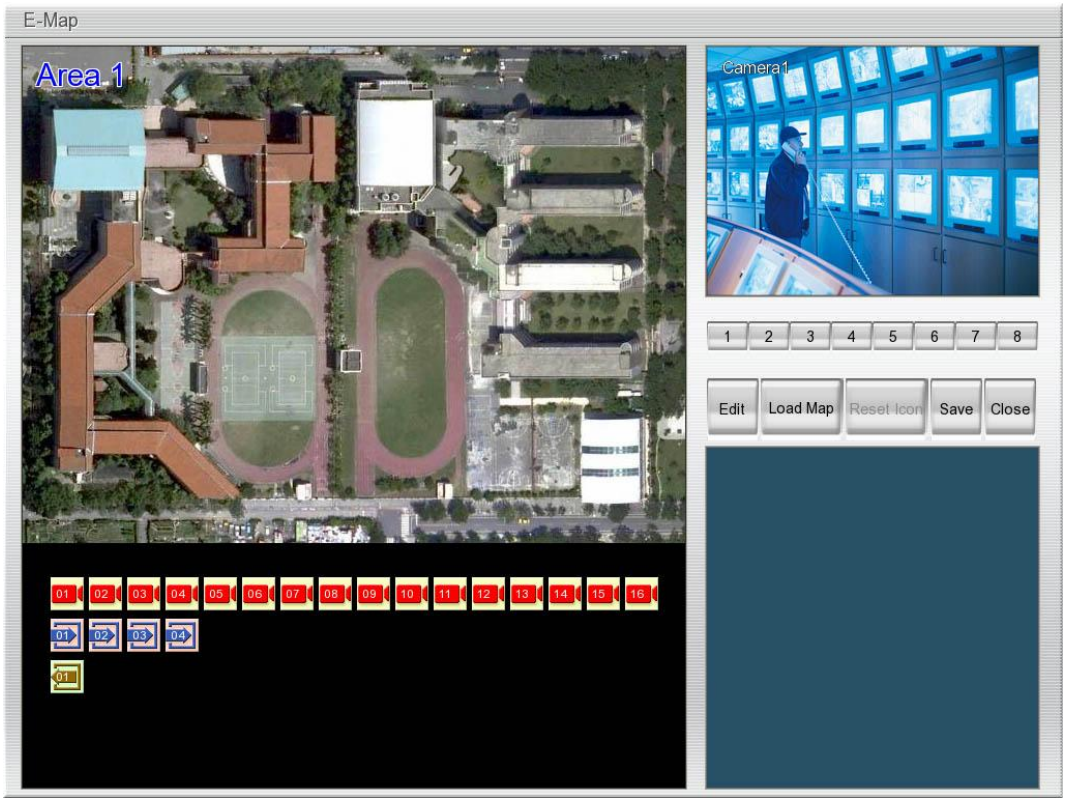
(13) Event log	Show the record of activities that take place in the system. (see also Chapter 2.2.3)
(14) AutoScan	Start/Stop video screen cycle switch.
(15) Full screen	View in full screen. To return, press the right button of the mouse or **ESC** on the keyboard or click the arrow icon.  When you switch to full screen in multiple-screen mode, **Left** click to toggle to only display one of the video in the multiple-screen mode or all.
(16) Alarm	Alert and display warning info.
(17) Virtual Keyboard	Click to enable virtual keyboard.

2.2.1 Setting Up and Using the Emap

E-Map can hold up to 8 maps in *.jpg format. You may locate the camera, sensor and relay on the map.

To Set Up the Emap

1. Click **Emap** button.
2. When the Emap screen appears, click the area number (1 to 8 buttons) on where you want to insert the map.

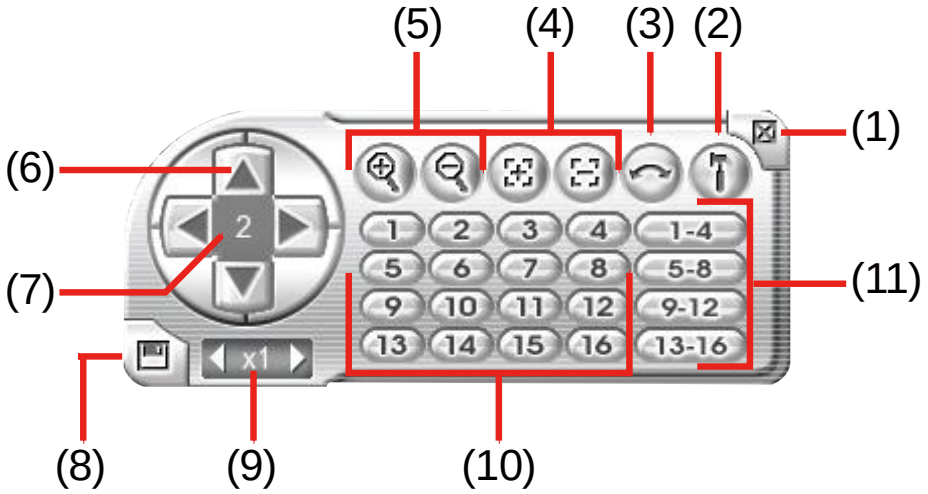


3. Click **Load Map** to insert the map. When the open dialog box appears, locate and select the map and click **Open**.
4. When the inserted map appears on the Emap screen, click **Edit**. You may now drag the camera, sensor, and relay icons to its place on the map. Icons on the map can be relocated anywhere. If you are going to locate the icon on the map to other area, you need to drag the icon to the black pane at the bottom of the Emap screen and then switch to the area on where you want to locate the icon. To bring all the icons back to the black pane at the bottom of the Emap screen, click **Reset Icon**.
5. When you are done, click **Save** button to save the new setting. To exit Emap screen, click **Close**.

To Use the Emap

1. Click **Emap** button.
2. In the Emap screen, click the camera icon to switch on the area where the camera is located on the map and to display the video at the upper right corner of the Emap screen. At the lower right corner of the Emap screen, it lists all the warning message.
3. Click **Close** to exit Emap screen.

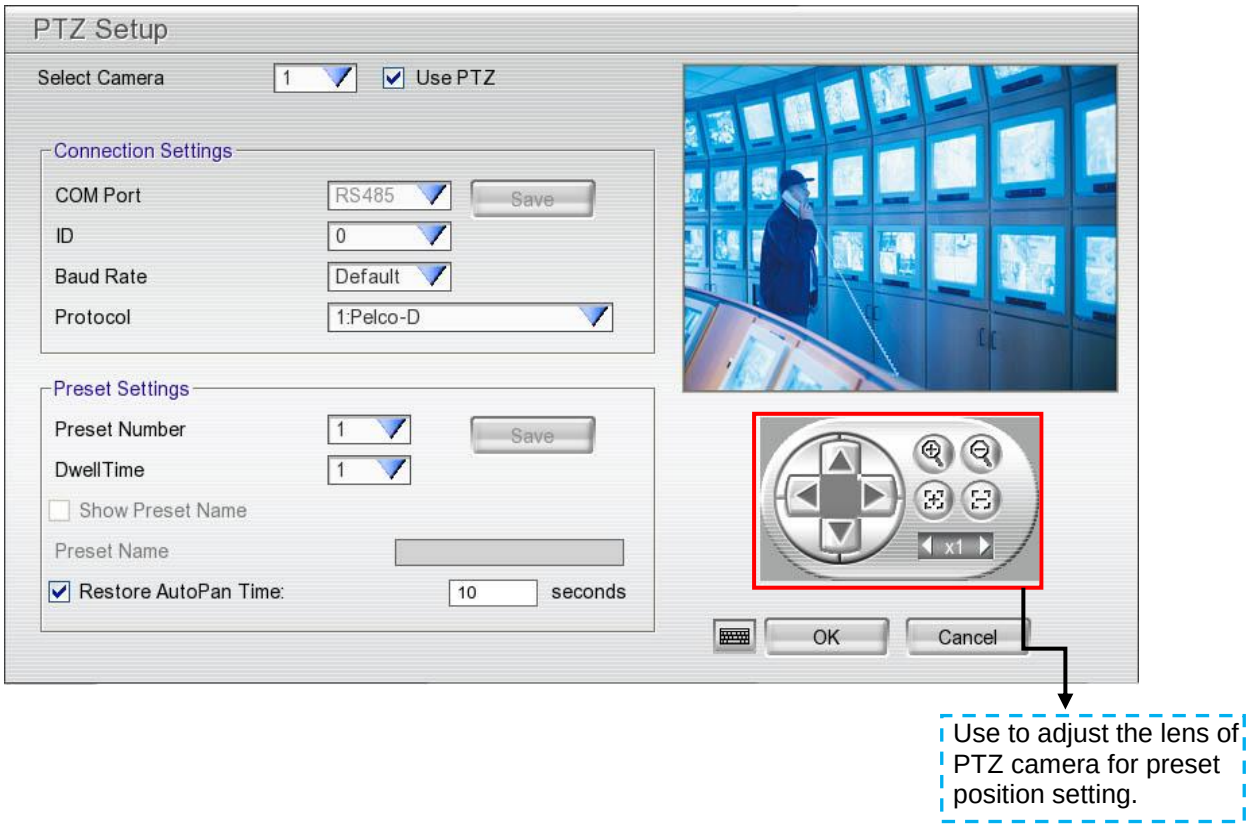
2.2.2 Familiarizing the Buttons in PTZ Camera Controller



Name	Function
(1) Close	Exit PTZ camera controller.
(2) Setup	Configure PTZ cameras.(see also Chapter 2.2.2.1 and Chapter 2.2.2.2)
(3) AutoPan	Operate the PTZ cameras automatically based on the selected camera group preset position number.
(4) Focus +/-	Adjust the focus manually to produce clear image.
(5) Zoom +/-	Zoom in and out the image.
(6) Direction buttons	Adjust and position the focal point of the PTZ camera.
(7) Camera ID pane	Display the PTZ camera number that is being operated.
(8) Save Camera preset position	Save the PTZ camera preset position number. Select the camera and click the preset position number and save it.
(9) Camera lens speed controller	Adjust the moving speed of the PTZ camera lens.
(10) Camera preset position number	Move the PTZ camera to the preset point.
(11) Group AutoPan	Select to automatically operate PTZ camera in group.

2.2.2.1 Setup the Analog PTZ Camera

1. Select the channel of analog PTZ camera on Preview UI.
2. Click **PTZ** button from preview UI. And then, the PTZ control panel will show up on screen.
3. In the PTZ control panel, click **Setup** (see also Chapter 2.2.2).
4. When the PTZ Setup dialog box appears, select the camera number and mark the **Use PTZ** check box to enable PTZ setting.



5. In the Connection Settings section, fill in the following selections. Then, click **Save** to keep the settings.
   - **COMPort:** The connecting port is fixed and can't be changed. The default is RS485 port.
   - **ID:** Assign an ID number for the PTZ camera.
   - **Baud Rate:** Please refer to the user's manual of the PTZ camera to make sure the baud rate.
   - **Protocol:** Please refer to the user's manual of the PTZ camera to make sure what protocol is using.
6. In the **Preset Setting** section, use the control panel to adjust the position of the PTZ camera and select the preset number to assign a number for the PTZ camera current position. Set the **DwellTime** (1-60 sec) for how long the PTZ camera stays in that position before it moves to the next one. Click **Save** to keep the **Preset Setting** settings.

The gray out functions mean DVR doesn't support.

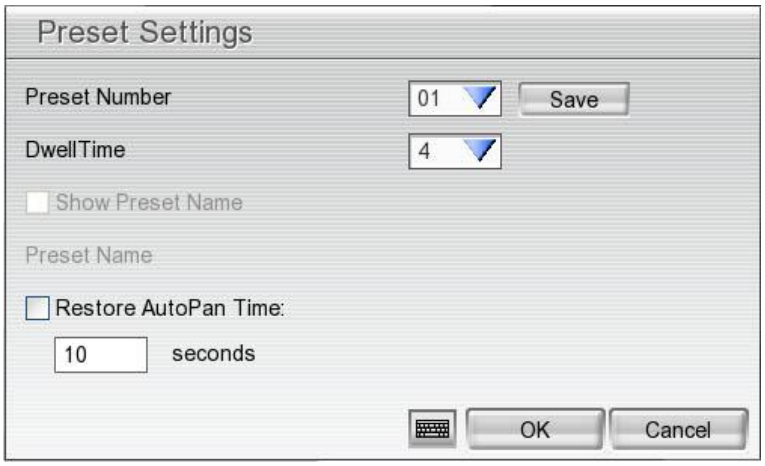
7. Repeat step 4 and 5, if you want to save another PTZ camera position.
8. **Restore AutoPan Time:** set a time period for restoring auto path function after the PTZ camera has been moved manually. Mark the check box and set the time period in second.
9. After finished all configurations, click **OK** to exit. Click **Cancel** will exit and without saving the settings.

2.2.2.2 Setup the IP PTZ Camera

When IP PTZ camera has successful connected with the DVR system, user can use the PTZ function directly without any configuration. To make connection of IP PTZ camera, please refer to Chapter 3.2.1.
In PTZ control panel, user can setup the preset position of the camera. The number of preset positions is depending on the IP PTZ camera has supported. For example: A brand of IP PTZ camera only supports 4 preset positions. Therefore, user only can setup 4 preset positions. User can refer to the user's manual of the IP PTZ camera to make sure the number of the preset positions has supported.
Please follow the below steps to configure the preset position.

The gray out functions mean DVR doesn't support.

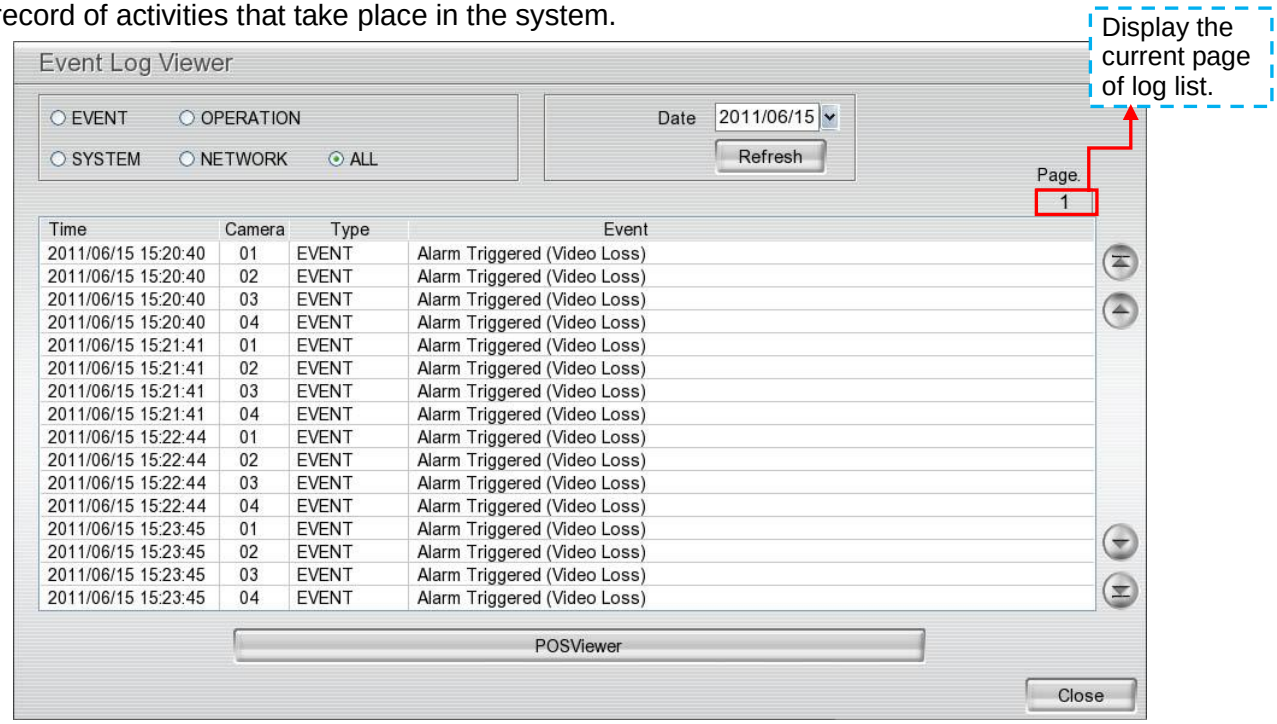
1. In preview mode, select the channel that is an IP PTZ camera channel.
2. Click **PTZ** button on preview UI and PTZ control panel will show up.
3. In the PTZ control panel, using the arrow button to adjust the position of IP PTZ camera.
4. And then, click **Setup** (see also Chapter 2.2.2). The Preset Settings window will show.



5. Select the **Preset Number** to assign a number as the PTZ camera current position. And then, click **Save** to save the setting.
6. Set the **DwellTime** for how long the PTZ camera stays in that position before it moves to the next one.
7. Repeat step 3 to 6, if you want to save another preset position.
8. **Restore AutoPan Time:** set a time period for restoring auto path function after the PTZ camera has been moved manually. Mark the check box and set the time period in second.
9. Click **OK** to complete the setting.

2.2.3 Using Event Log Viewer

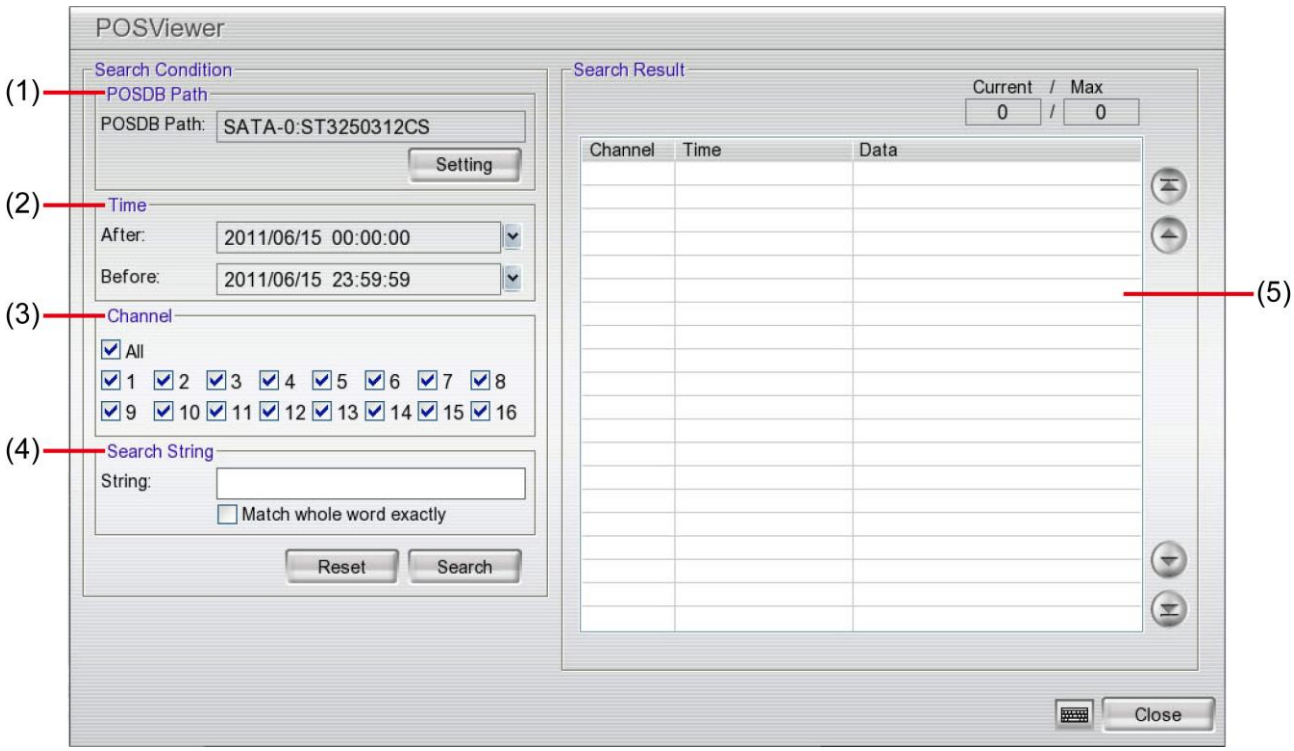
Show the record of activities that take place in the system.



1. Click the **Event Log** button on DVR system main interface. The Event log viewer window will show up.
2. Select the **Date** to view.
3. To filter the records, select and click the select button to display **Event**, **System**, **Operation**, **Network** or **All**.
4. Click button to go next page and click button to go to the last page. To go to previous page, click button. Click button will back to the first page. In **Page** column, it displays the current page number.
5. To exit the event log viewer window, click **Close** button.
6. To view POS event log, click POSViewer bar to call out the POSViewer window (see also Chapter 2.2.3.1).

2.2.3.1 Using POSViewer

To clear all setting, click **Reset** button. Click **Close** button will exit POSViewer window.



Name	Function
(1) POSDB Path	The storage path for POS event log. Click **Setting** to change the storage path.
(2) After/Befoer	Set a time period before and after of POS event log.
(3) Channel	Select the POS event log of channel
(4) Search String	Enter specific key word or word string to search the POS event log. Mark the "**Match whole word exactly**" box if wants to find exactly key word or word string of POS event log. Click **Search** button to start searching.
(5) Search Result	Display the POS event log of search result. Click button to go next page and click button to go to the last page. To go to previous page, click button. Click button will back to the first page. In **Current/Max** column, they display the current page number and maximum (total) page number.

2.3 Familiarizing the Buttons in Playback Mode

To switch in Playback mode, click **Playback** button at the lower right corner of Preview mode UI.

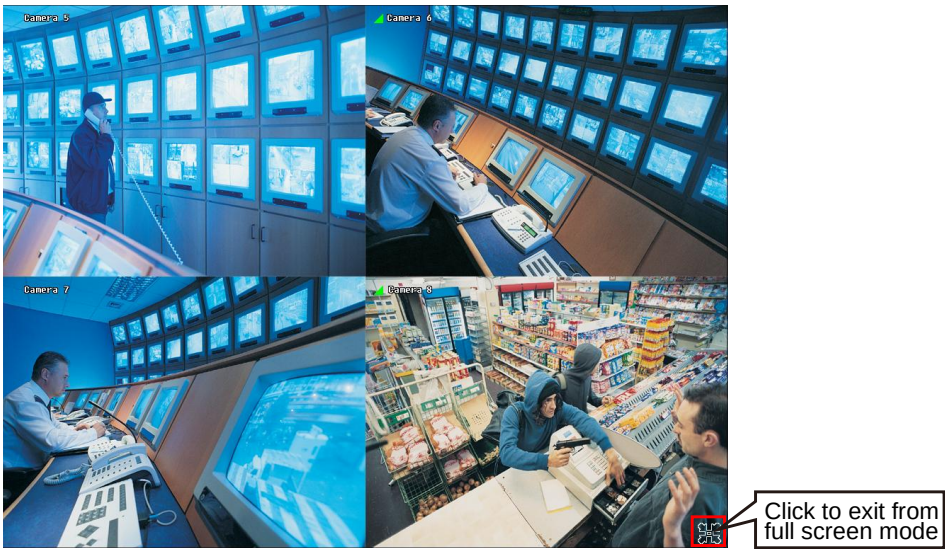
Name	Function
(1) Split Screen Mode	Select from 6 different split screen type to playback the recorded video file of all the cameras or one camera over the other or alongside on a single screen.
ℹ	– When you are in single screen mode, **Right click** and **Drag** a square on the area you want to enlarge. Right-click on the screen again, the screen view will back to normal view. – When you are in full screen mode, partial enlarges does not support.
(2) Progress bar	Show the progress of the file being played. You may move the bar to seek at any location of the track. When in single screen mode, the progress bar green color means motion recording file, blue color means general (always) recording file, and yellow color means video loss.
(3) Hour Buttons	Select and click to playback the recorded video file on the specific time frame.
ℹ	The Hour buttons represent the time in 24-hour clock. The blue bar on top of the hour button indicates that there is a recorded video file on that period of time. While the red bar indicates that you are currently viewing the recorded video file.
(4) Playback Control Buttons	From left to right order: **Begin:** Move at the beginning of the recorded video file. **Previous:** Go back to the previous frame. **Slower:** Play the recorded video file at the reduce speed from 64x, 32x, 16x, 8x, 4x, 2x, 1x, 1/2X, 1/4X. **Rewind:** Wind back the recorded video file. **Pause:** Briefly stop playing the recorded video file. **Play:** Play the recorded video file. **Faster:** Play the recorded video file at the speed of 2x, 4x, 8x, 16x, 32x or 64x. **Next:** Go to the next frame. **End:** Go to the end of the recorded video file.

Name	Function
(5) Date	Select the date on the calendar and the time from 00 to 23 to where to start playing the recorded video file.

The numbers from 00 to 23 represent the time in 24-hour clock. The numbers from 01 to 08 represent the camera ID. The blue colored column indicates that there is a recorded video file on that period of time. While the red colored column indicates on where to start playing the recorded video file.

(6) Preview	Switch to Preview mode.
(7) Playback	Switch to Playback mode. This allows you to view the recorded video file.
(8) Status bar	Display the recorded date, time and play speed.
(9) Camera ID	Show the number of cameras that are being viewed. When you are in single screen mode, click the camera ID number to switch and view other camera.
(10) Export	Export includes Snapshot, Output Video Clip, and Backup function. ■ **Snapshot:** Capture and save the screen shot either in *.jpg format. ■ **Output Video Clip:** Save the segmented file in *.dvr format to USB pen drive (see also Chapter 2.3.1). ■ **Backup:** Save the playback file to USB device or DVD-ROM disk (see also Chapter 3.6).

Please plug the USB pen drive to DVR server before execute **Export** function (Snapshot, Output Video Clip, and Backup).

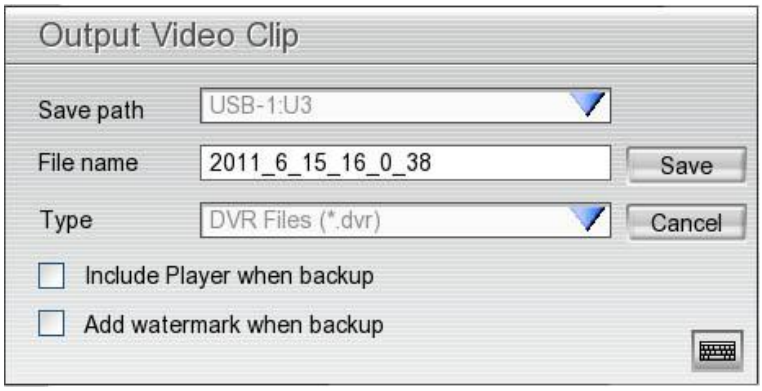
(11) Segment	Keep a portion of the recorded video (see also Chapter 2.3.1).
(12) Full screen	View in full screen. To return, press the right button of the mouse or **ESC** on the keyboard or click the arrow icon.  When you switch to full screen in multiple-screen mode, **Left** click to toggle to only display one of the video in the multiple-screen mode or all.
(13) Event log	Show the record of activities that take place in the system. To filter the records, select and click the option button to only display Event, System, Operation, Network or All.
(14) Bookmark	Mark a reference point when reviewing the recorded video file to which you may return for later reference (see also Chapter 2.3.2).
(15) Find Next	Search for the next event. You can use this when you are using Event Search function.
(16) Event Search	Search from the recorded activities that were recorded in event log (i.e., Sensor, Motion, Video Loss). (see also Chapter 2.3.3)
(17) De-interlace	To enhance the video quality. Set the de-interlace mode to #1, if you are capturing motionless picture and #2, if it captures lots of movement.

2.3.1 To Cut and Save a Portion of the Recorded Video

1. Use the Playback Control buttons or drag the bar on the playback progress bar and pause on where you want to start the cut. Then, click **Segment** to set the begin mark.

2. Use the Playback Control buttons or drag the bar on the playback progress bar and pause on where you want to end the cut. Then, click **Segment** to set the end mark. To cancel segmentation, click **Segment** button again.

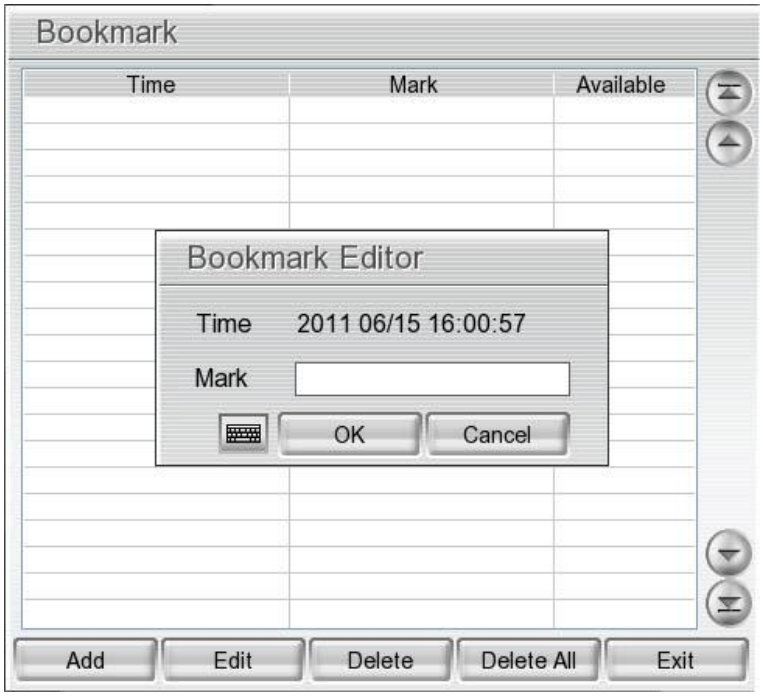
3. Click **Export** button and select **Output Video Clip** to save the wanted portion. User can rename the **File name**. Mark "**Include Player when backup**" option to include a Qplayer application in backup file for palyback backup video clip later on. Mark "**Add watermark when backup**" option to have watermark protection on backup file and user can have watermark exam on Qplayer application.



4. In the **Save As** dialog box, locate on where user wants to save the file, type the filename, and select the video format.
5. To playback the backup video clip, using Qplayer application that is included in backup folder.

2.3.2 To Bookmark a Video Section

1. Click **Bookmark** button
2. In the Bookmark dialog box, you may do the following:
   - **Add** to create the new reference mark in the bookmark list. Click **Add** button, the Bookmark Editor dialog will show up. Enter the name or short description in **Mark** column. And then, click **OK** to complete a bookmark.
   - **Edit** to change the mark description.
   - **Delete** to remove the selected reference mark in the list.
   - **Delete All** to remove all the reference marks in the list.
   - **Exit** to close Bookmark dialog box.
3. Select and click one in the bookmark list to review the file.

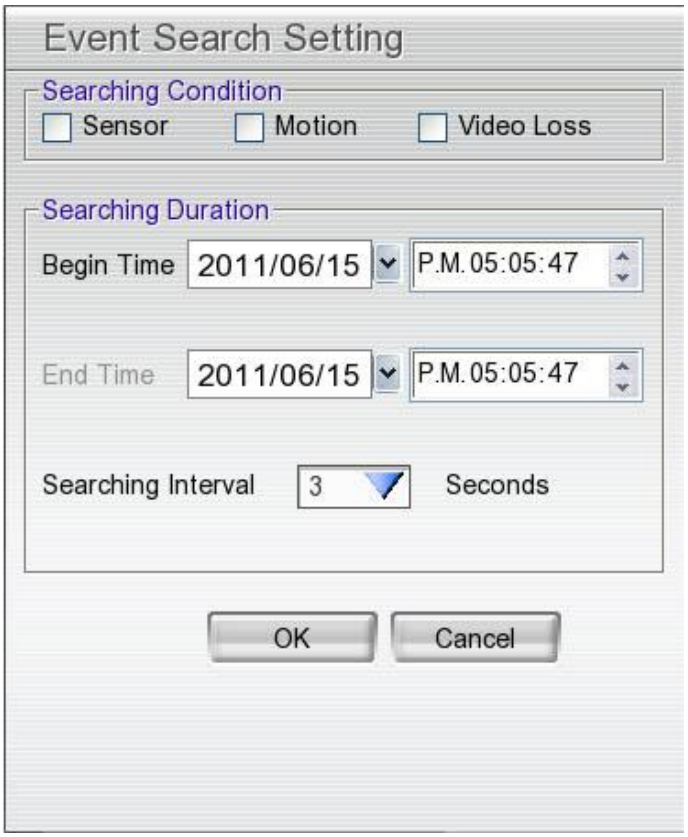


2.3.3 Using the Event Search

1. Click on the video screen on where you want to search.
2. Click **Event Search**. The Event Search Setting dialog box would appear on the screen.
3. In the Event Search Setting dialog box, check the type of condition you want to search. Then, click **OK** to start searching. The video search would stop at the frame that matches the condition. To keep on searching click Find Next.
4. You may also set to search and list all the result. In the **Search Duration** section, set the **Begin Time** and **End Time**. Set the **Searching Interval** time that system won't list out the same events in a period of time that user has setup. Then, click **OK** to start searching.

The DVR system will automatically set the date of **End Time** at 3 days later of **Begin Time**. If event data are less than 3 days, the DVR system will set End Time at current date. Time of End Time is adjustable.

5. When the Event list appear, click and select the item you want to view.



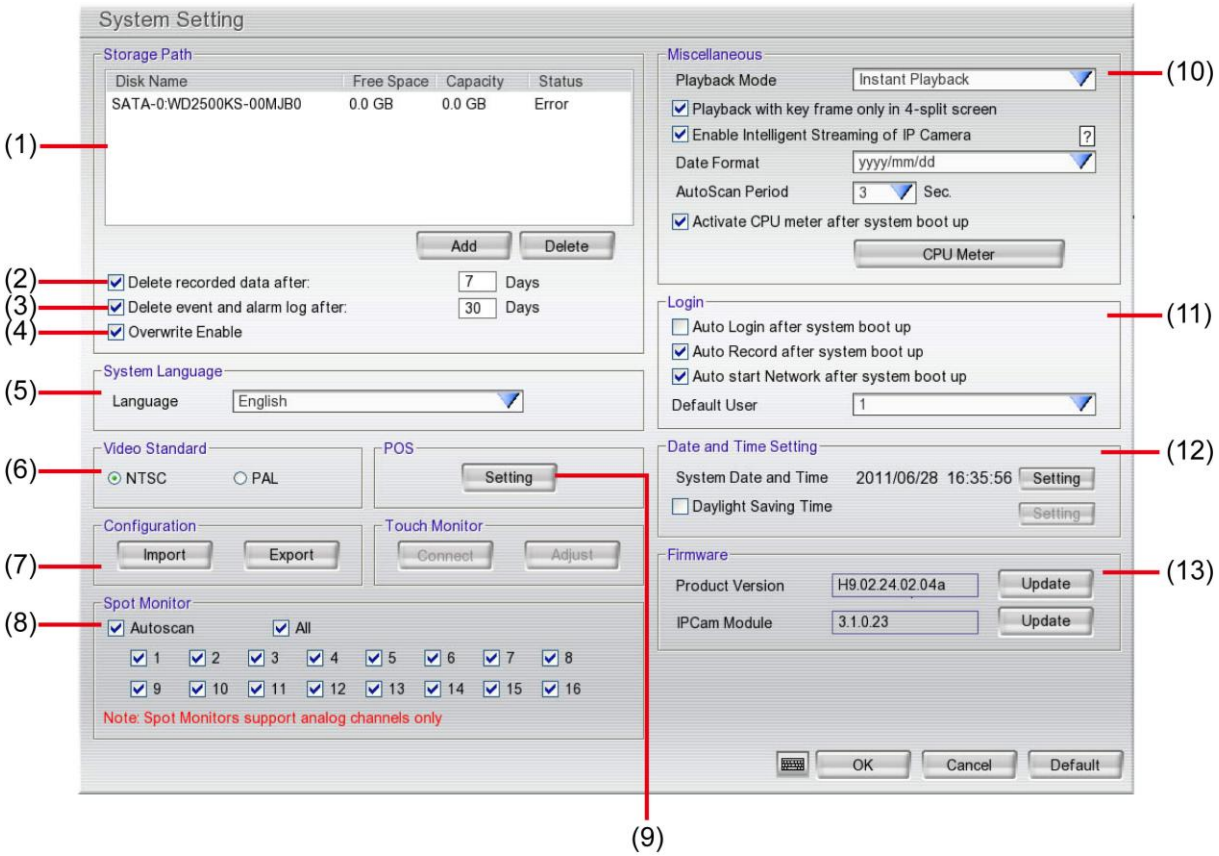
Chapter 3 Customizing the DVR System

In the Preview screen mode, click

button to customize your DVR. When the DVR configuration setup selection appears, select and click the buttons you want to change the setting.

3.1 System Setup

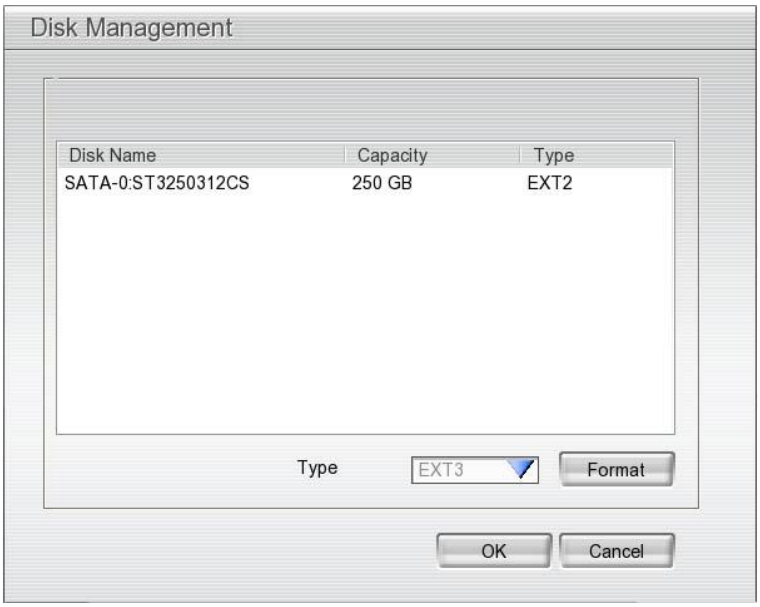
In the System Setting dialog box, click **OK** to accept the new settings, click **Cancel** to exit without saving.



(1) Storage Path

Set the HDD on where to save the data. In case you have more than one storage device, the system automatically saves the data to the next storage device. To insert another storage device, click **Add** and select the storage path. To remove the selected path, click **Delete**.If the hard disk is the first time for DVR system, please format the hard disk before starting to use it. To format the hard disk, select the hard disk and click **Format** button.

- Before formatting hard disk, please stop all operations on DVR system.
- While formatting hard disk, the CPU usage will be near to 100% and might slow down the DVR system response.



(2) Delete recorded data after

If you want the system to automatically erase the data after a certain days, enable the **Delete recorded data after** check box and enter the number of days in **Days** text box.

(3) Delete event and alarm log after

If you want the system to automatically erase the event and alarm log after a certain days, enable the **Delete event and alarm log after** check box and enter the number of days in **Days** text box.

(4) Overwrite Enable

When there is not enough free space to record one hour data, the system automatically replaces the oldest data.

(5) Language

Customize the system to display the tool tips and dialogs based on the selected language. Default language is in English.

(6) Video Standard

Change and select the proper video system according to your camera video system. If the video system setting is wrong, the video would appear abnormal.

(7) Configuration

Backup a copy of all the settings and allows you to regain the same settings back. To save the current settings, click **Export**. To replace the settings with the one you have saved, click **Import**.

Please plug the USB pen drive to DVR server before **Import** or **Export** the configuration from or to USB pen drive.

(8) Spot Monitor

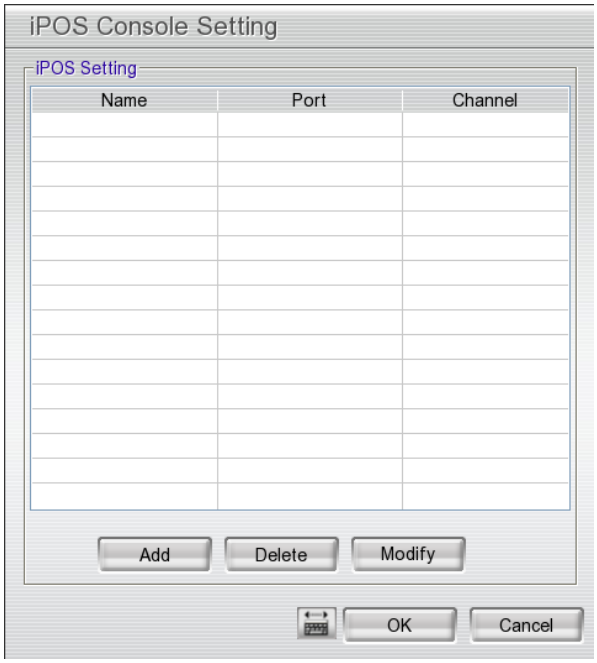
Select the camera user wants to display on spot monitor or select **All** for all cameras. Mark **Autoscan** to enable display to take turns automatically.

(9) POS

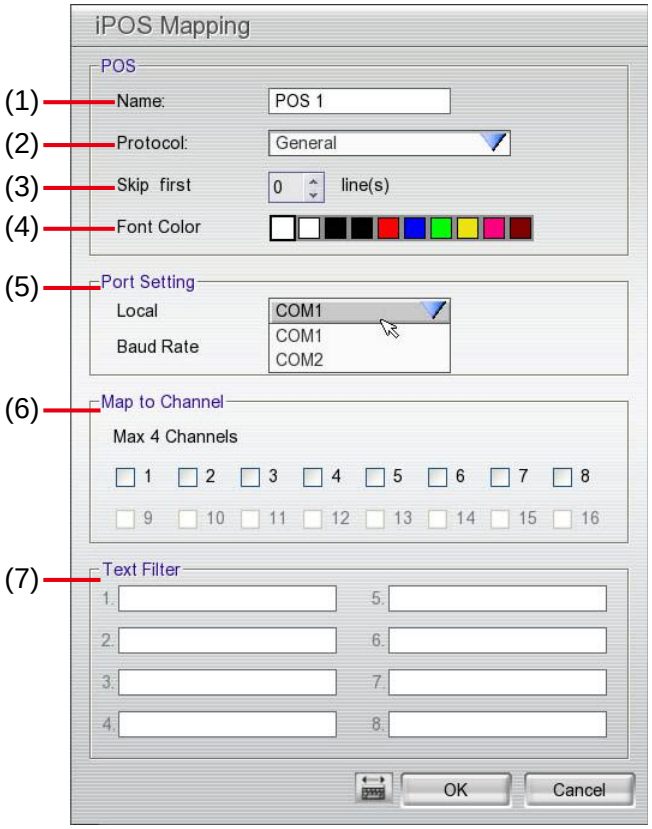
Mask and POS function cannot be enabled at the same time.

Set from which camera screen to display the data from the POS equipment. Click **Setting**, to set the POS Console Setting.

1. In the POS Console Setting dialog box, click **Add** to set a new POS setting, **Modify** to change the POS setting, and **Delete** to remove the selected POS setting. Click **OK** to save and close POS Console Setting.



2. In the POS Mapping dialog box, click **OK** to accept the settings and **Cancel** to exit without saving the new setting.



(1) Name: Enter a name to identify the POS.
(2) Protocol: Select the protocol.
(3) Skip first: Set the number of lines you want to be removed.
(4) Font Color: Select the text color of the POS data.
(5) Port Setting : Select the **Local**(Com port) where it is connected and **Baud Rate**. If users just need to connect to one POS device, they can connect AVer™ USB2RS232 Box to the com port of DVR unit, and select **COM 1**. If users need to connect to 2nd POS device, please connect AVer™ USB2RS232 Box to the front USB port, then connect AVer™ Data Box to the port 1 of AVer™ USB2RS232 Box, and select **COM 2**.
(6) Map to Channel: Select to which camera number to display the transaction text.

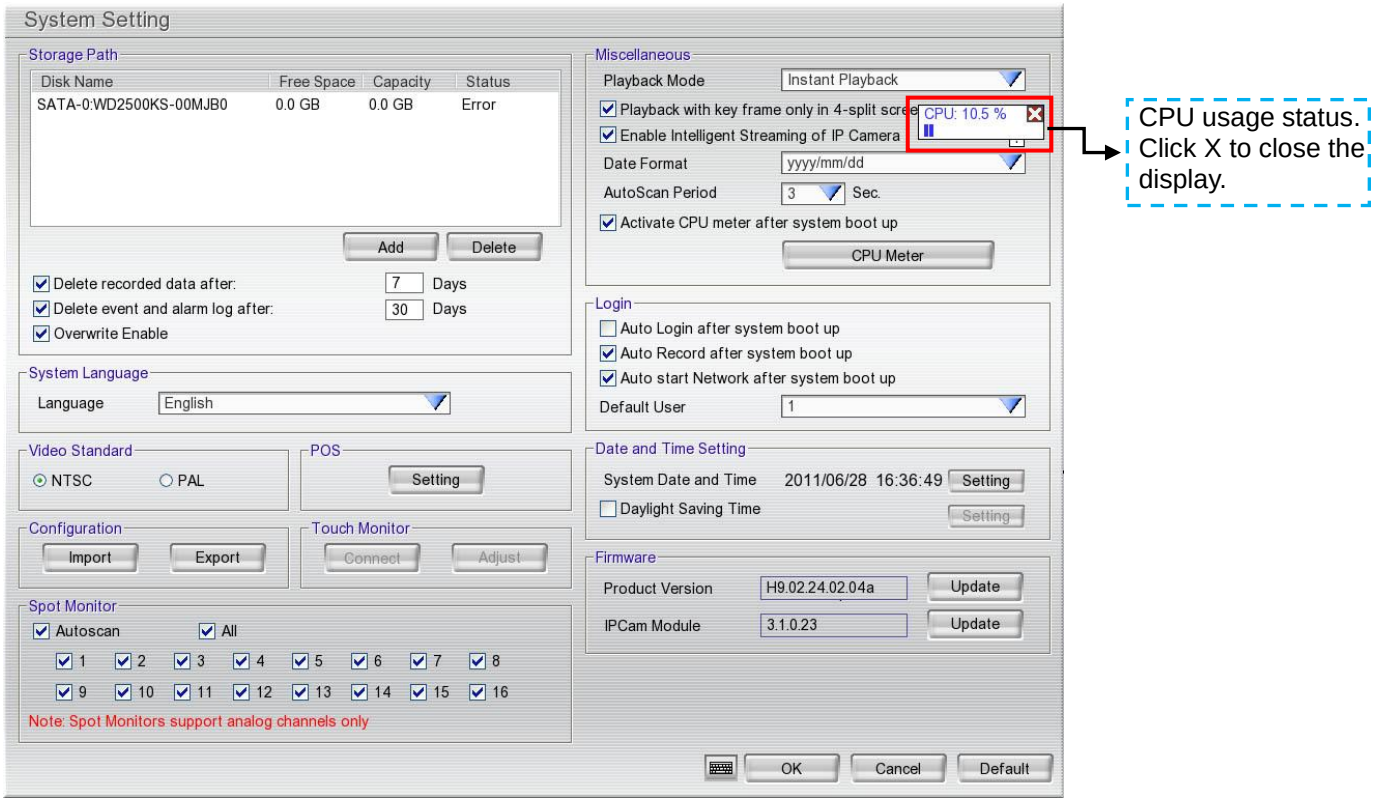
(7) Text Filter: Enter the word you want to be removed.

(10) Miscellaneous

- **Playback mode:** Select the mode of playback the video.
  - **Select date and time:** Select the date and time which user wants to playback.
  - **Play the last file:** Automatically playback the video from the last hour
  - **Instant Playback:** Automatically playback the video which has just recorded
- **Playback with key frame only in 4-split screen:** Enable to only playback key frame when in 4-split screen playback mode.
- **Enable Intelligent Streaming of IP camera:** The DVR now supports 3 streaming for preview, recording, and remote site in Aver™ SF1311H IP camera series. User can setup 3 streaming in Detail of (5) IP camera information in Chapter 3.2.1. Click **?** mark will show up the intelligent streaming information dialog box.

The DVR system supports first 4 channels (CH01 ~ 04) for IP camera with intelligent streaming is enabled.

- **Date Format**
  Select the date format which wants to display in select date and time playback mode.
- **Auto Scan Period**
  Set the time gap of the Auto Scan function from 3 to 10 seconds. This automatically switches to the next video in cycle depending on the set time gap.
- **Activate CPU meter after system boot up**
  Mark to enable the CPU usage status display on the screen automatically when system boot up. User can manually to enable by clicking the **CPU Meter** button.



(11) Login

Enable the conditions in Login section you want the system to automatically carry out.

- **Auto Login after system boot up**
  Execute the DVR when the operating system is started.
- **Auto Record after system boot up**

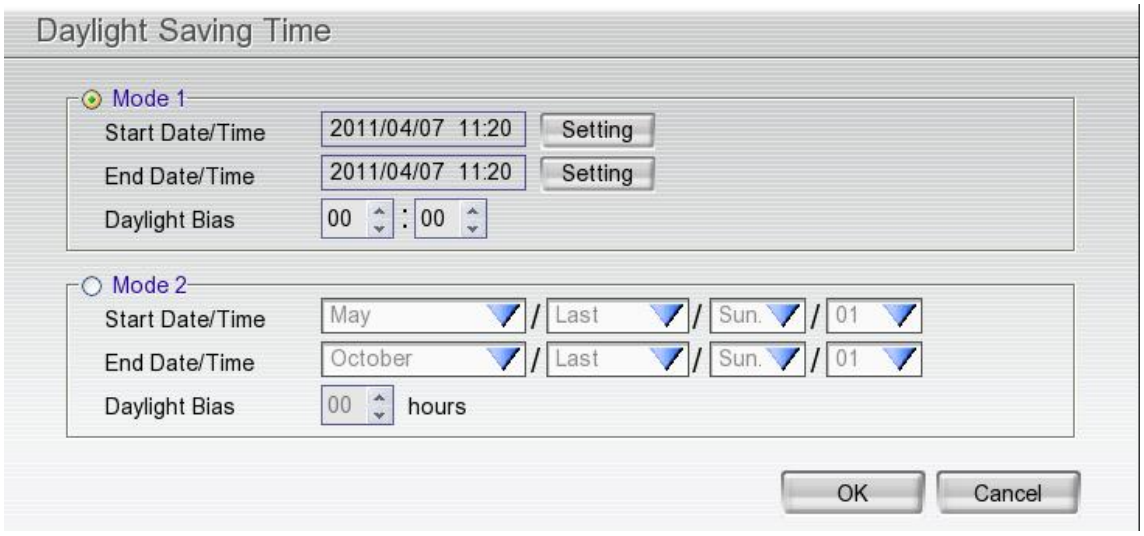
Automatically start video recording when the DVR is executed.

- **Auto start Network after system boot up**
  Automatically start network connection when the DVR is executed.
- **Default user**
  Automatically log in to the selected default user when the DVR is executed.

(12) Date and Time Setting

Mark **Daylight Saving Time** to enable daylight saving function.

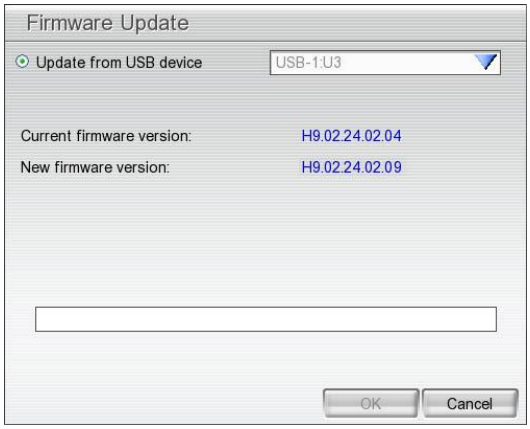
- **Daylight Saving Time:** Click **Setting** to setup **Start** and **End Date/Time**. User can depends on daylight saving time mode in your country to select **Mode 1** or **Mode 2**. Mode 1 is setting up specific start date/time and end date/time. Mode 2 is setting up fixed day of month in every year for start and end date/time.



- **Daylight Bias:** Assign a time that it is for daylight saving time offset in your time zone. For example: if the time zone is in U.S. Eastern, the time offset is 1 hour.

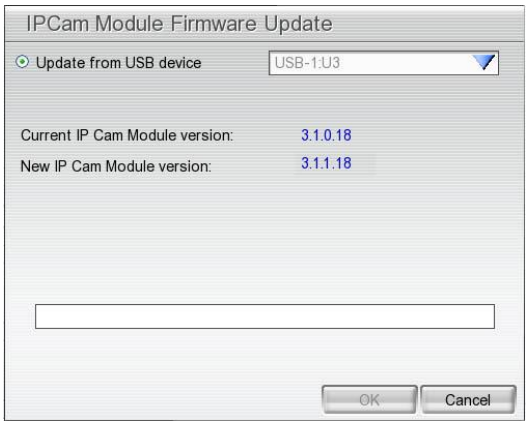
(13) Firmware

- **Product Version:** Upgrading the firmware of DVR system.
  1. Save the firmware on root directory of USB pen drive. And then, plug USB pen drive to DVR server.
  2. Click **Update** button, a **Firmware Upgrade** window is displayed.



  3. Select the USB pen drive if there is more than one USB storage device from drop down list. The DVR unit will auto detects the firmware.
  4. Click **OK** to start upgrading.

- **IPCam Module:** Update firmware of IP camera.
  1. Save the firmware on root directory of USB pen drive. And then, plug USB pen drive to DVR server.
  2. Click **Update** button, a **IPCam Module Firmware Upgrade** window is displayed.



  3. Select the USB pen drive if there is more than one USB storage device from drop down list. The DVR unit will auto detects the firmware.
  4. Click **OK** to start upgrading.

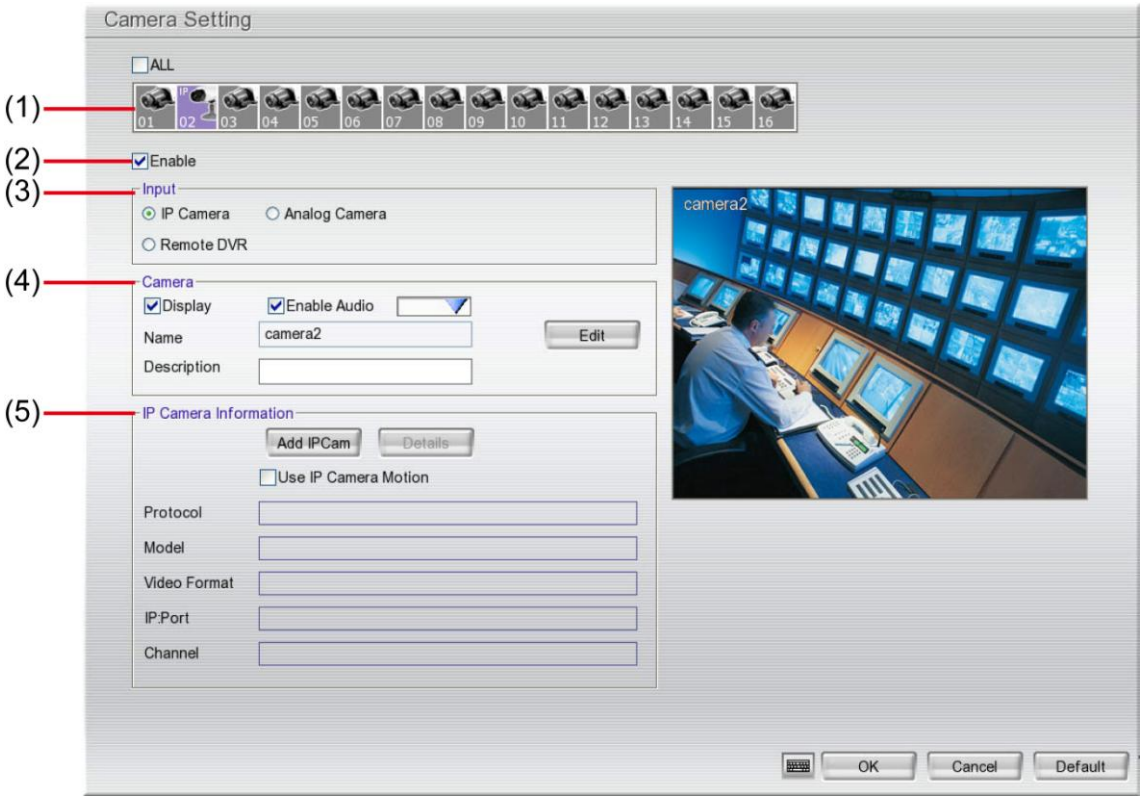
3.2 Camera Setup

The DVR system supports 16 cameras in combination of analog and IP cameras or only analog cameras. The DVR system only supports first 4 channels (CH1 ~ 4) for IP camera.

3.2.1 To Setup IP Camera

Click **Default** will back to the factory default value.

- EH1116H-4 Nano only supports first 4 channels (CH1~4) for IP camera.
- 1.3 MP with H.264/MPEG4/ MJPEG on the first 4 channels and 2.3MP with MJPEG on the 1st channel for IP cam connection.



(1) Camera Icons

Select the camera number you want to view. To enable/disable all cameras, click **ALL** check box.

(2) Enable

Set to enable/disable the selected camera. When there is no video source on the camera, we suggest disabling it so that the system won't detect it as video loss error.

(3) Input

Select the camera type as **IP Camera**.

(4) Camera

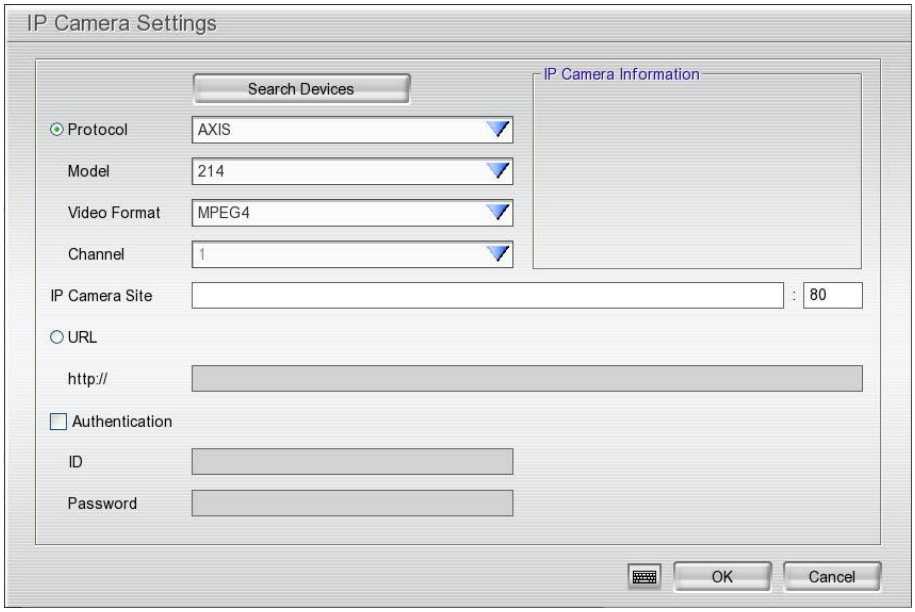
- **Display**
  Enable/disable to show the video. Even if the video of the selected camera is hidden you can still record the video and preview it in playback mode.
- **Enable Audio**
  When channel type is **IP camera**, the audio is not supported.
- **Name**
  Change the camera name

- **Description**
  Add a short comment

(5) IP Camera Information

To setup IP camera and display current IP camera information.

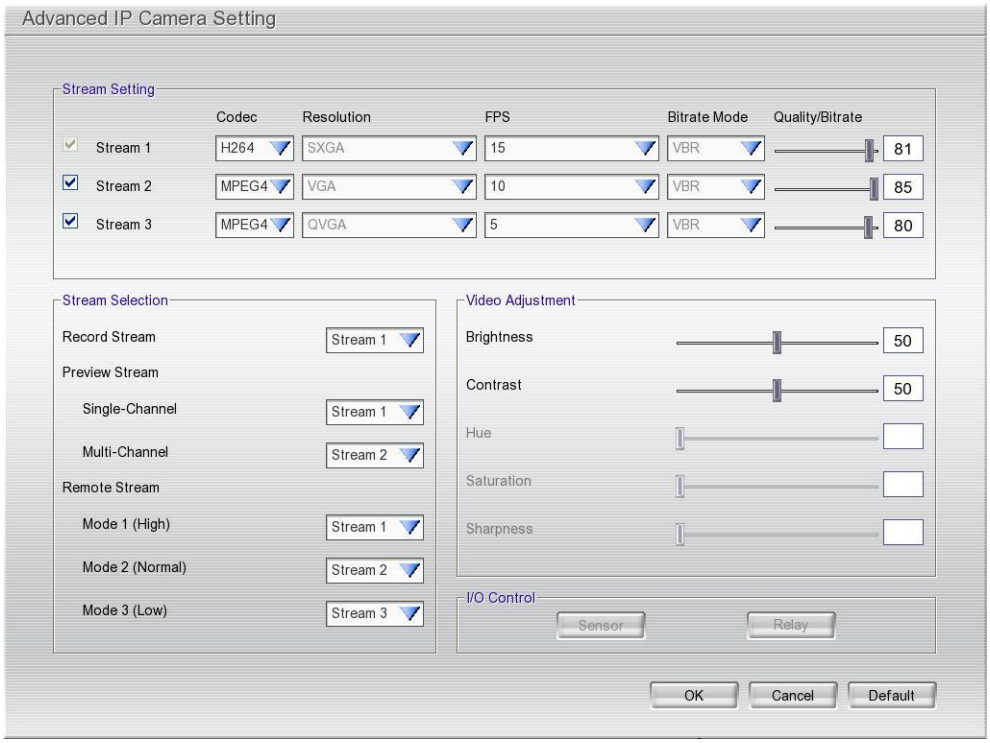
- **Use IP Camera Motion:** Enable to use the motion detection function of IP camera if the IP camera has support motion detection and the motion recording will based on IP camera's motion detection setting.
- **IP Setting:** Click **Add IPCam** to setup and connect the IP camera.



1. Click the radio button of **Protocol** to enable the setup of IP camera.
2. Select the **Protocol**, **Model**, **Video Format**, and **Channel** of the IP camera.
3. User also can click **Search Devices** button to find the IP cameras that can be detected on your LAN network.
4. Enter IP address and connecting port in **IP Camera Site** column.
5. Also, user can enter URL of IP camera instead of IP address.
6. If the IP camera has authority request, please enable **Authentication** and enter **ID** and **Password**.
7. Click **OK** to connect with the IP camera.

- **Detail:** The setting of advanced IP cameras are related to the **Intelligent Streaming** function in System setting. Click **Default** will back to the factory default value.

The Detail setting only support for the AVer™ SF1311H IP camera.



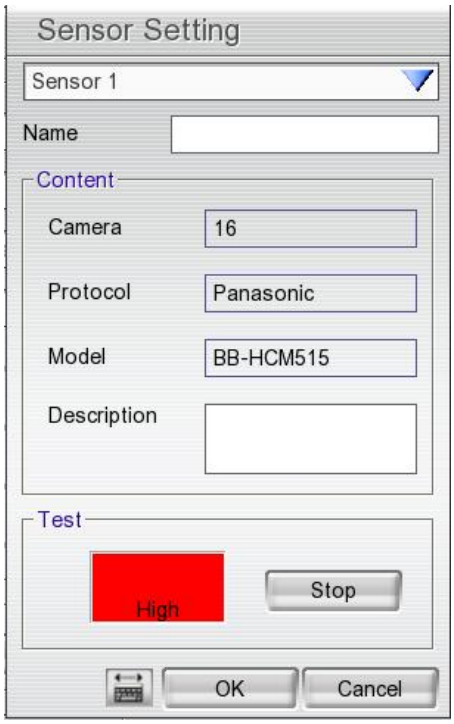
- ✓ **Stream Setting:** user can setup **Codec**, **Resolution**, **FPS**, **Bitrate Mode**, and **Quality Bitrate** of **Stream 2and Stream 3** on the selected IP camera channel. The Stream 1 is stetted in default.
- ✓ **Stream Selection:** user can setup which stream (**Stream 1** ~ **Stream 3**) to use on **Record**, **Preview**(Quad and Single mode), and **Remote site**.
- ✓ **Video Adjustment:** user can adjust **Brightness** and **Contrast** of IP camera.

The selection and adjustment items may vary by the camera supported.

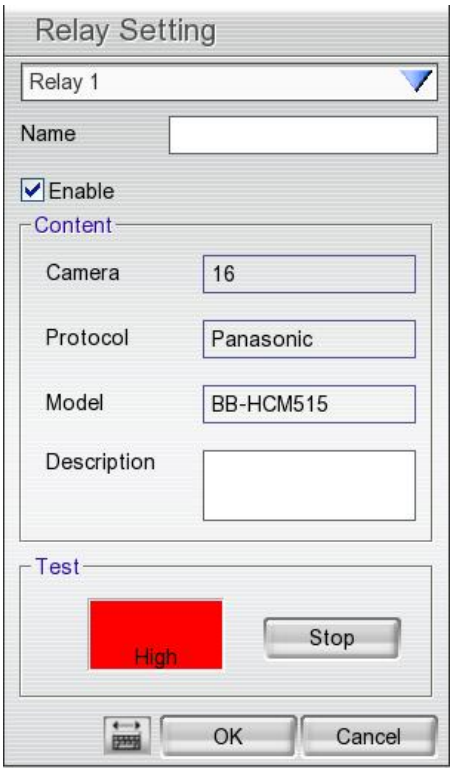
■ I/O Control: Setup the sensor and relay that is embedded on the IP camera.

➢ **Sensor Setting**

1. Click **Sensor** button.
2. Click the drop-down list and select the sensor ID number.
3. Enter sensor name in **Name** column
4. The system automatically detects the camera and input relates information. In the Content section, enter sensor **Description**.
5. In the test section, click **Test** to check the sensor status. **Red** is high and **Green** is low.
6. Click **OK** to exit and accept the setting and **Cancel** to exit without saving the setting.

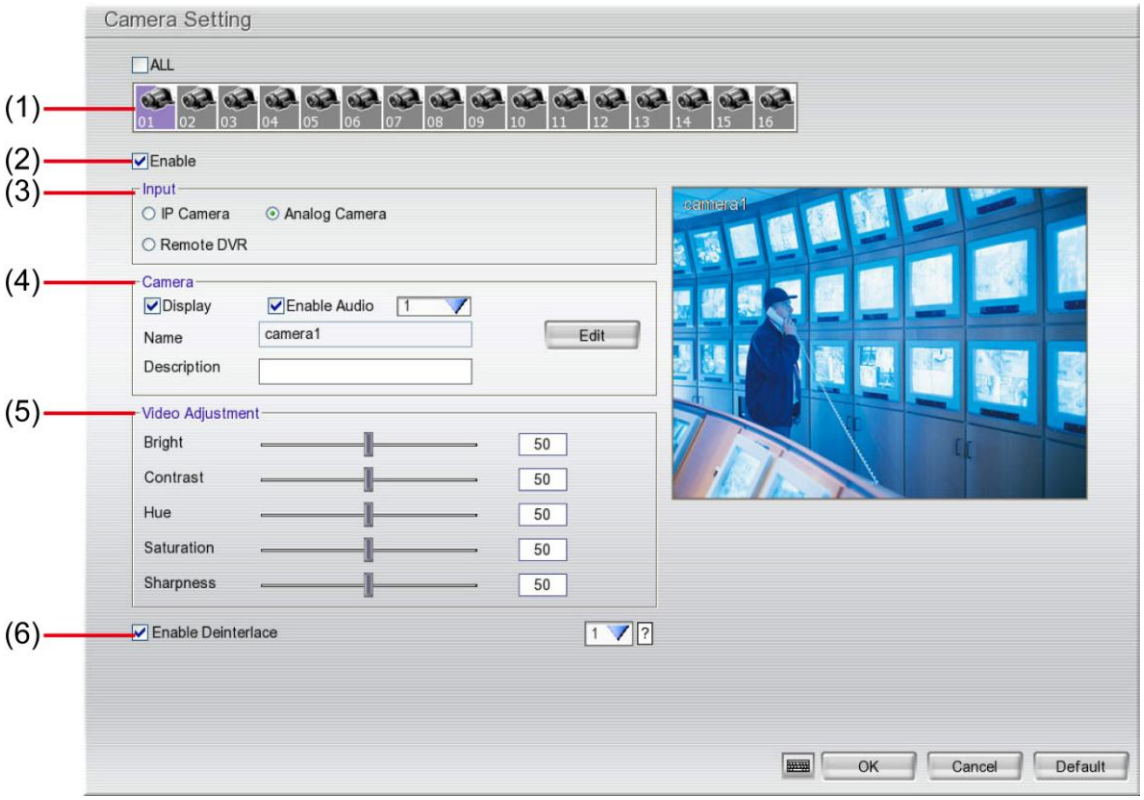


- **Relay Setting**
  1. Click **Relay** button.
  2. Click the drop-down list and select the relay ID number.
  3. Enter relay name in **Name** column
  4. The system automatically detects the camera and input relates information. In the Content section, enter relay **Description**.
  5. In the test section, click **Test** to check the relay status. **Red** is high and **Green** is low.
  6. Click **OK** to exit and accept the setting and **Cancel** to exit without saving the setting.



3.2.2 To Setup Analog Camera

Click **Default** will back to the factory default value.



(1) Camera Icons

Select the camera number you want to view. To enable/disable all cameras, click **ALL** check box.

(2) Enable

Set to enable/disable the selected camera. When there is no video source on the camera, we suggest disabling it so that the system won't detect it as video loss error.

(3) Input

Select the camera type as **Analog Camera**.

(4) Camera

- **Display**

  Enable/disable to show the video. Even if the video of the selected camera is hidden you can still record the video and preview it in playback mode.

- **Enable Audio**

  Mark **Enable Audio** will allow recording the sound that received from selected audio input channel (audio input channel located on back panel of DVR). For example: user has enabled audio and select audio input channel 1 on the camera 4. Therefore, DVR will record the video of camera 4 and sound that received from audio input channel 1 together. While playback, user will hear sound that received by audio input channel 1 on camera 4.

- **Name**

  Change the camera name

- **Description**

  Add a short comment

(5) Video Adjustment

Adjust the Brightness, Contrast, Hue, Sharpness, and Saturation of the camera.

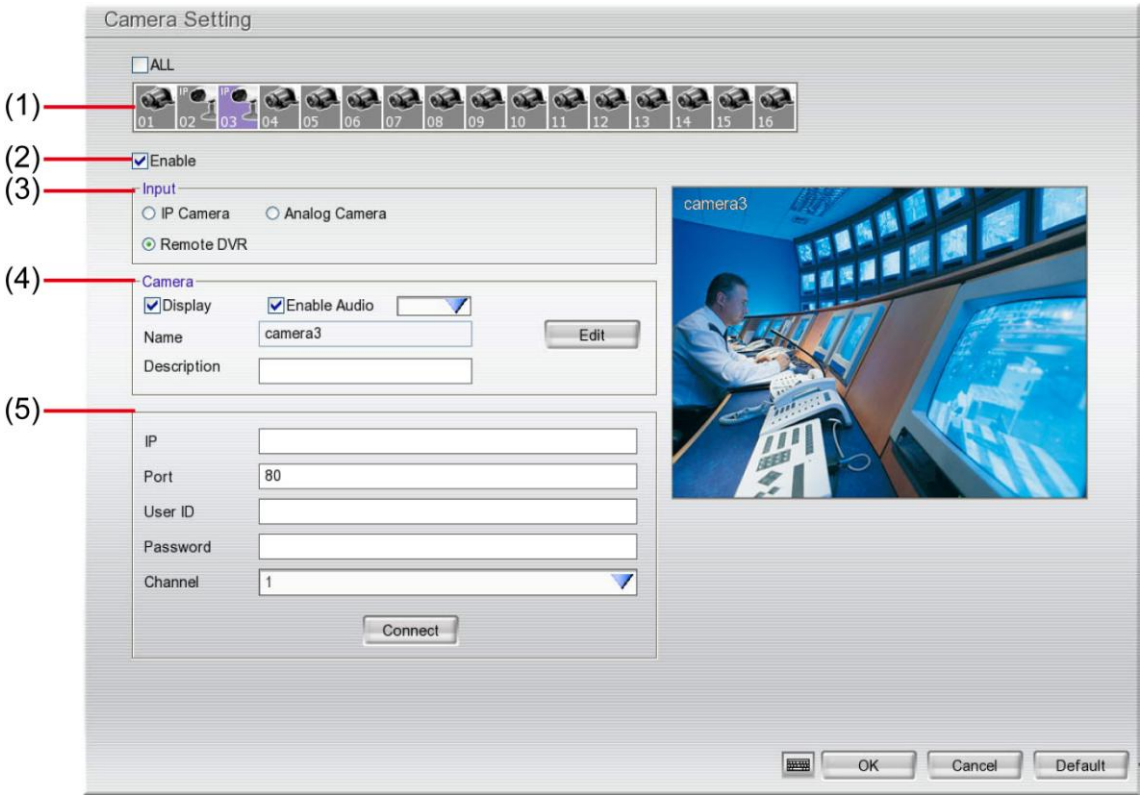
(6) Enable De-interlace

Enhance the video quality. Set the **Enable Deinterlace** mode to #1, if you are capturing motionless picture and select #2, if it captures lots of movement.

3.2.3 To Setup Camera from the Remote DVR

User can add the camera from another DVR through the network.

EH1116H-4 Nano only support first 4 channels (CH1~4) for remote DVR's camera.



(1) Camera Icons

Select the camera number you want to view. To enable/disable all cameras, click **ALL** check box.

(2) Enable

Set to enable/disable the selected camera. When there is no video source on the camera, we suggest disabling it so that the system won't detect it as video loss error.

(3) Input

Select the camera type as **Remote DVR**.

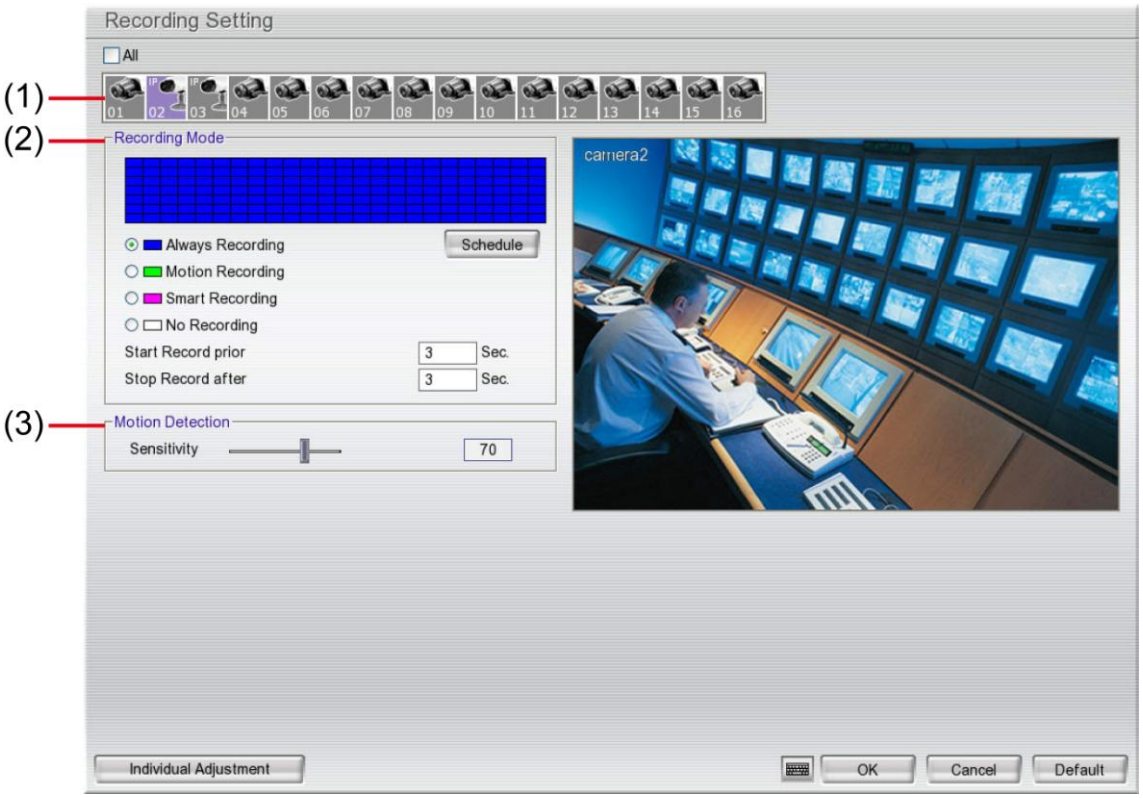
(4) Camera

- **Display**
  Enable/disable to show the video. Even if the video of the selected camera is hidden you can still record the video and preview it in playback mode.
- **Enable Audio**
  When camera type is **Remote DVR**, the audio is not supported.
- **Name**
  Change the camera name
- **Description**
  Add a short comment

- **IP**
  Enter the IP address of the camera
- **Port**
  The port for connection
- **User ID**
  Enter the user id that for connecting authority
- **Password**
  Enter the password that is for connecting authority
- **Channel**
  Select the channel of connected camera
- **Connect**
  Click to connect the camera when all configurations are set.

3.3 Recording Setup

3.3.1 Setup IP Camera Record Setting



(1) Camera Icons

Select the camera number you want to set the recording setting. To select all the cameras, enable the **ALL** check box. To select more than one camera, **Right click** on the camera icon. To select one camera only, **Left click** on the camera icon. The camera icon turns purple when it is selected.

(2) Recording Mode

The horizontal blocks from 00 to 23 represent the time in 24-hour clock and the vertical block 1 to 7 represent the day in the week block (Sunday to Saturday). To record in full 24 hours and 7 days a week, select the recording mode and click the ⊙ button. If you want to only record at a particular time or day, click **Schedule** button and select the **Recording Mode** , and then click on the time or day blocks. When the system starts recording a red triangle mark would appear at the upper left corner of the screen. The recording modes are listed below:

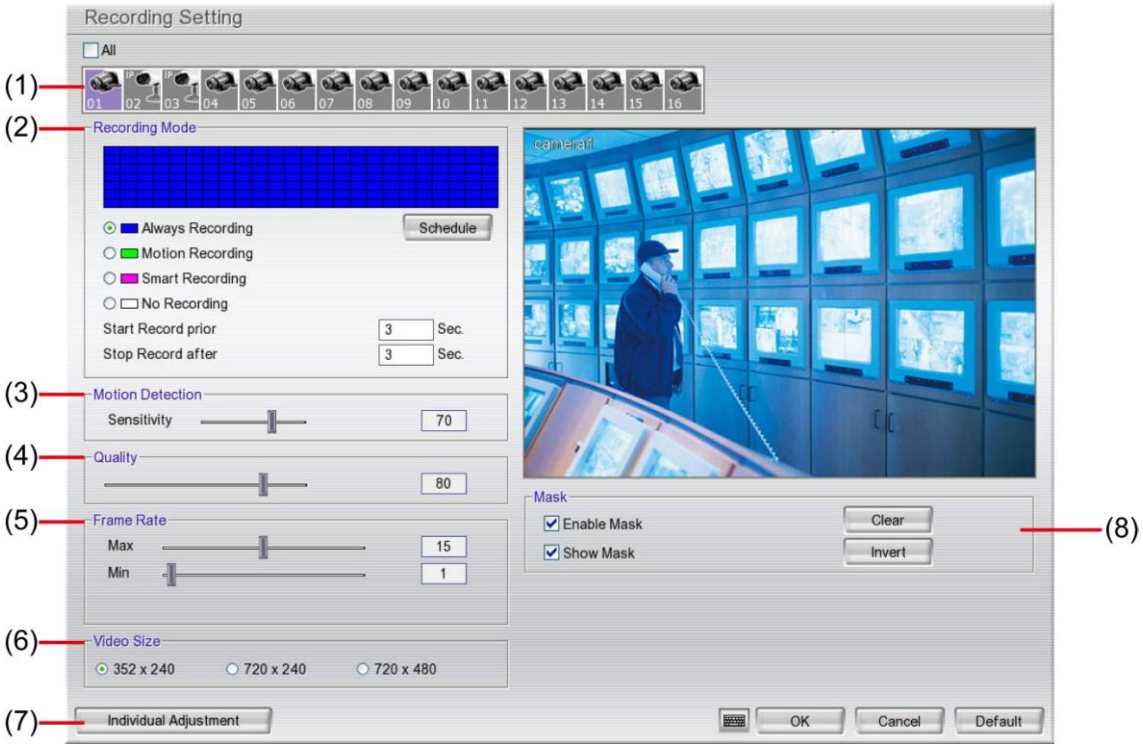
- **Always Recording**
  Record the video from the selected camera and save it to the designated storage device
- **Motion Recording**
  Start recording the video from the selected camera only when the system detects movement. Once a motion is detected, the system automatically saves the previous frames and stop based on the **Start Record Prior** and **Stop Record After** settings.
- **Smart Recording**
  Automatically switch to recorded at the maximum frame rate once a motion is detected and if there is no motion, it records only key frame.
- **No Recording**
  The system won't do any recording.

(3) Motion Detection

Adjust the sensitivity of the motion detection. The higher the value, the finer the sensitivity is detected. When it detects a motion, a green triangle mark would appear at the upper left corner of the screen.

3.3.2 Setup Analog Camera Record Setting

Click **Default** will back to the factory default value.



(1) Camera Icons

Select the camera number you want to set the recording setting. To select all the cameras, enable the **ALL** check box. To select more than one camera, **Right click** on the camera icon. To select one camera only, **Left click** on the camera icon. The camera icon turns purple when it is selected.

(2) Recording Mode

The horizontal blocks from 00 to 23 represent the time in 24-hour clock and the vertical block 1 to 7 represent the day in the week block (Sunday to Saturday). To record in full 24 hours and 7 days a week, select the recording mode and click the ⊙ button. If you want to only record at a particular time or day, click **Schedule** button and select the **Recording Mode** , and then click on the time or day blocks. When the system starts recording a red triangle mark would appear at the upper left corner of the screen. The recording modes are listed below:

- **Always Recording**
  Record the video from the selected camera and save it to the designated storage device
- **Motion Recording**
  Start recording the video from the selected camera only when the system detects movement. Once a motion is detected, the system automatically saves the previous frames and stop based on the **Start Record Prior** and **Stop Record After** settings.
- **Smart Recording**
  Automatically switch to record at the maximum frame rate setting once a motion is detected and recording time will be based on **Stop Record After** setting; if there is no motion, it records at the minimum frame rate setting. Set the frame rate in **(5) Frame Rate**.
- **No Recording**
  The system won't do any recording.

(3) Motion Detection

Adjust the sensitivity of the motion detection. The higher the value, the finer the sensitivity is detected. When it detects a motion, a green triangle mark would appear at the upper left corner of the screen.

(4) Quality

Adjust the video quality. The higher the value, the lower the compression level and uses more hard disk space.

(5) Frame Rate

Set the maximum and minimum number of frames to be recorded during motion and motionless state. The frame rate ranges from 01 to 30 for NTSC and 01 to 25 for PAL. The higher the frame rate, it uses more hard disk space.

Always recoding frame rate is depending on value of max frame rate.

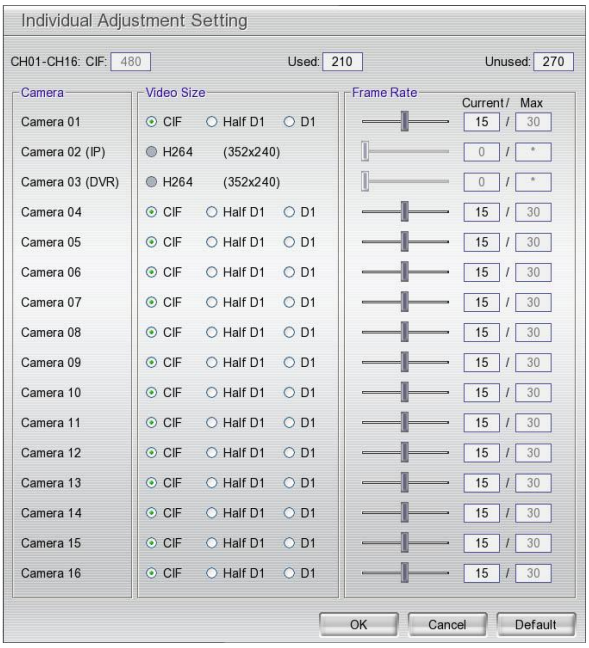
(6) Video Size

Select the size of the video and click the ⊙ button. The higher the size, the larger the file it create.

(7) Individual Adjustment

Each camera can adjust video size and frame rate individually. Click **Default** will back to the factory default value. The frame rate usage is shown in **Used** and **Unused** columns by CIF mode.

Adjusting video size and frame rate by channel, only available on the analog camera.



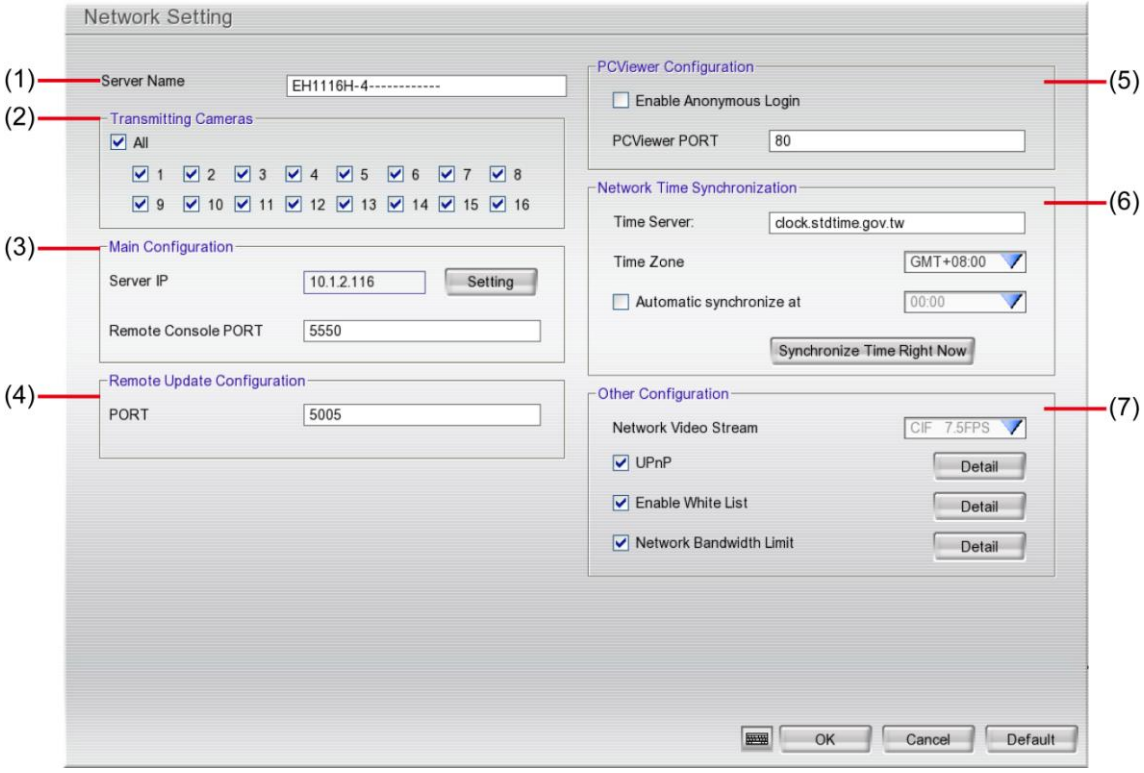
(8) Mask

Mask and POS function cannot be enabled at the same time.

Mark an area on the screen to disregards the motion in the marked area and to only monitor outside the marked area. Enable the **Enable Mask** and click-and-drag an area on screen that user wants to mask. To clear all mask area, click **Clear** button. To inverse the mask area, click **Invert** button. The original selected area will exchanged with un-selected area. To show the mask area on preview screen, enable **Show Mask**. The mask is able to see on the screen only when preview screen is in single screen mode

3.4 Network Setup

Click **Default** will back to the factory default value.



(1) Server Name

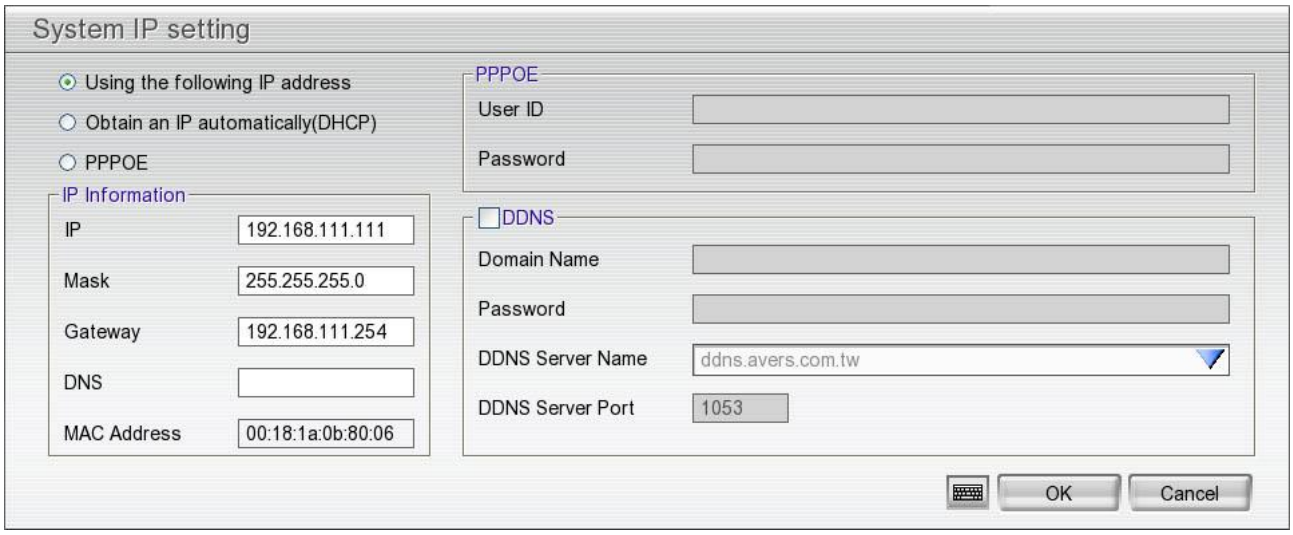
Assign a name for the DVR unit. Alphabet letters and numbers only.

(2) Transmitting Cameras

Select and click on the camera number in the Transmitting Camera section you want to make it accessible via internet using PCViewer, Remote Console, PDA Viewer and JavaViewer (still image). To select all the cameras, enable the **ALL** check box.

(3) Main Configuration

Set the DVR IP address and **Remote Console Port**. You need this when accessing DVR server from the remote location via internet. Click **Setting** to setup DVR IP.



- **Using the following IP address:** Assigns an IP address for the DVR system. Fill in the IP related parameters in **IP information** section.
  - **IP:** Assign a constant IP address which a real IP address gives from ISP to DVR system.

- **Mask:** It is a bitmask used to identify the sub network and how many bits provide room for host addresses. Enter the subnet mask of the IP address which user has assigned to DVR system.
- **Gateway:** A network device acts as a passageway to internet. Enter the network gateway IP address
- **DNS:** Domain Name Server translates domain names (such as www.abb.com.tw) to IP addresses. Enter the IP address of DNS if it is available.
- **MAC Address:** An identifier hardware address of DVR unit that is assigned by the manufacturer for identification. User don't need to fill in, it will generated by system automatically.

■ **Obtain an IP automatically (DHCP):** Assign the IP address by local DHCP server to DVR system.

■ **PPPOE:** Point-to-Point Protocol over Ethernet is a network protocol for encapsulating PPP frames in Ethernet frames. It is used mainly with ADSL services. If your network is using ADSL service connecting to internet, and then, select PPPOE mode. Enter **User ID** and **Password** that is given by your ISP for PPPOE connecting authority.

■ **DDNS:** DDNS(Dynamic Domain Name Service) is a data query service mainly used on the Internet for translating domain names into Internet addresses. Users can register their own domain name on **http://ddns.avers.com.tw** or **http://dyndns.org**. (See Appendix A)

- **Domain Name**
  Enter the domain name that user has registered.
- **Password**
  A password use to access DDNS that user has setup when register the domain name
- **DDNS Server Name**
  Select your DDNS server. The default only has one DDNS server now. It may provide more DDNS in future.
- **DDNS Server Port**
  Fill in the port that connects to DDNS server. Default is 1053.

(4) Remote Upgrade Configuration

A port is using for the remote firmware upgrade through network.

(5) PCViewer Configuration

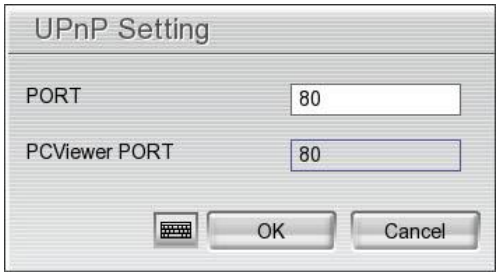
Activate **Enable Anonymous Login** to remotely access the DVR server without the need of password. Fill in the**PCViewer PORT** for remote accessing connection.

(6) Network Time Synchronization

Adjust the DVR system time same as network time server. Fill in the **Time Server** IP address or domain name and select the **Time Zone**. User can enable **Automatic Synchronize at** to set automatic synchronize time on a daily basis. Or, user can click **Synchronize Time Right Now** to adjust time right away.

(7) Other Configuration

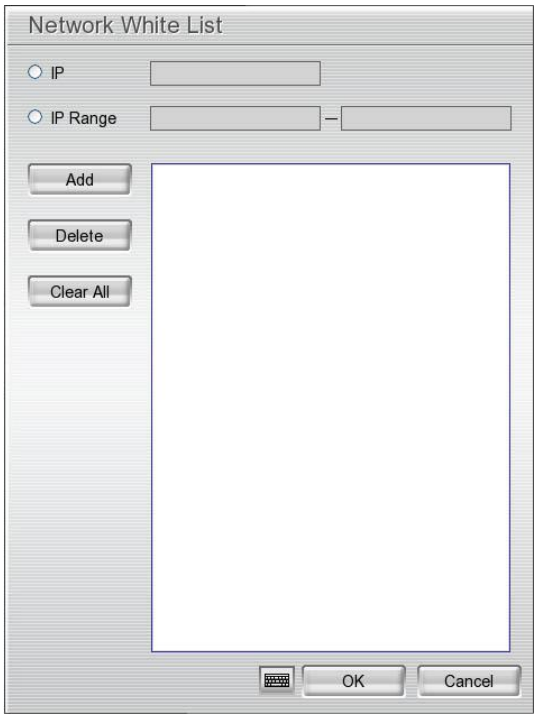
- **Network Video Stream**
  It displays the remote video stream value that is depended on the video quality user has selected on remote site.
- **UPnP**
- Enable UPnP function to automatically map the port setting of PCViewer to the router on the local network. This function is available when the router has enabled the UPNP function.
- Assign a port on DVR as an UPnP protocol port. The **PCViewer Port** is displayed the current PCViewer port number.



- **Enable White List**

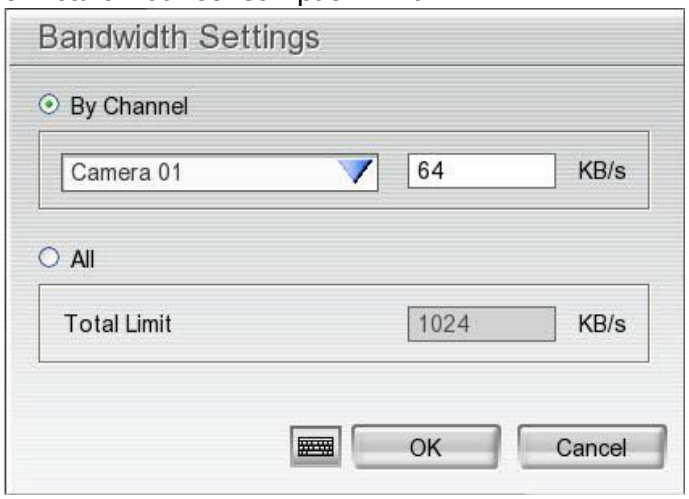
Without any IP/IP range is assigned in White List table, none of IP address/IP range is allowed to access DVR when White List function is enabled.

An access permit list for the remote accessing of DVR server. Enter the IP address and click **Add**. Or, enter a range of IP address and click **Add**. To delete the IP from the list, select the IP and click **Delete** button. To reset the input, click **Clear** button.



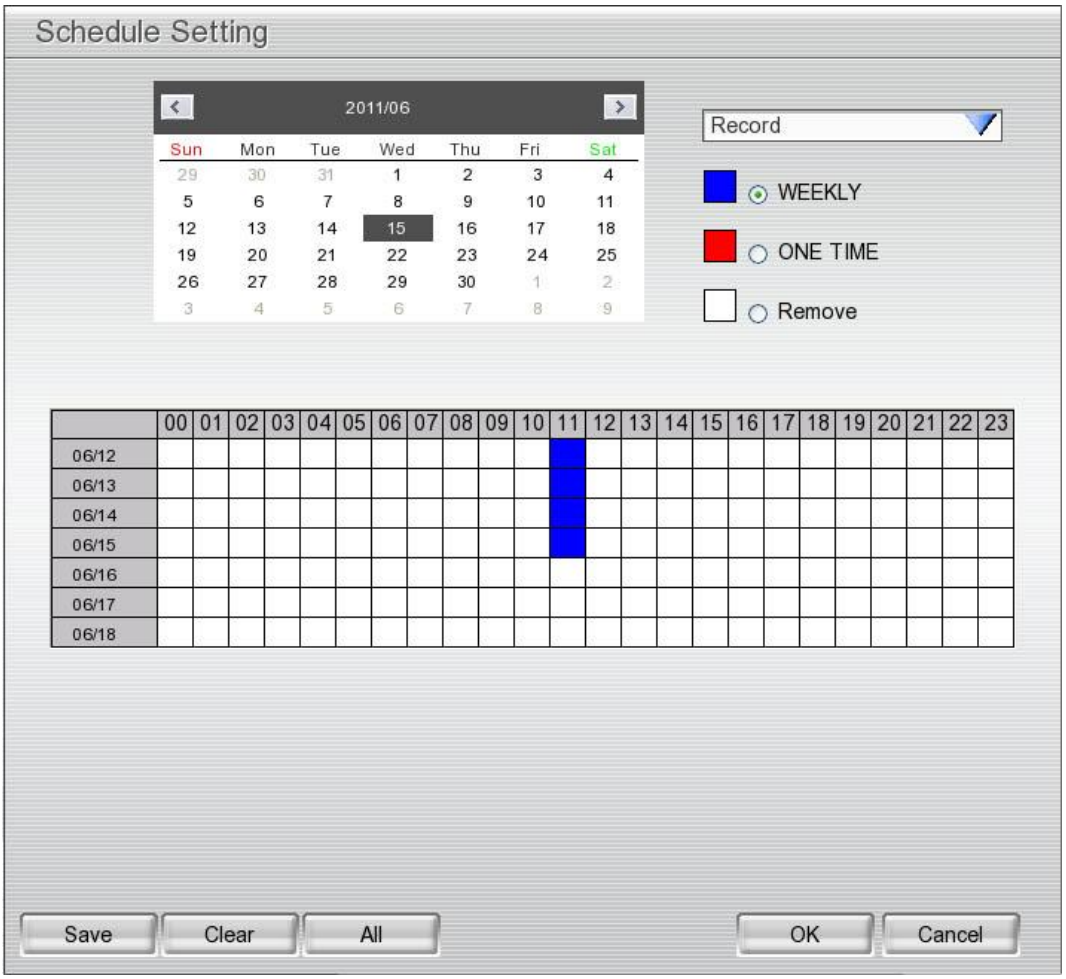
- **Network Bandwidth Limit**

By Channel: Set the network bandwidth by each channel.
All: Set the total network bandwidth consumption limit.



3.5 Schedule Setting

Schedule to record, enable network, reboot and disable alarm of all the cameras either weekly or one time. The number from 00 to 23 represent the time in 24-hour clock. The left most column display the days in a week.



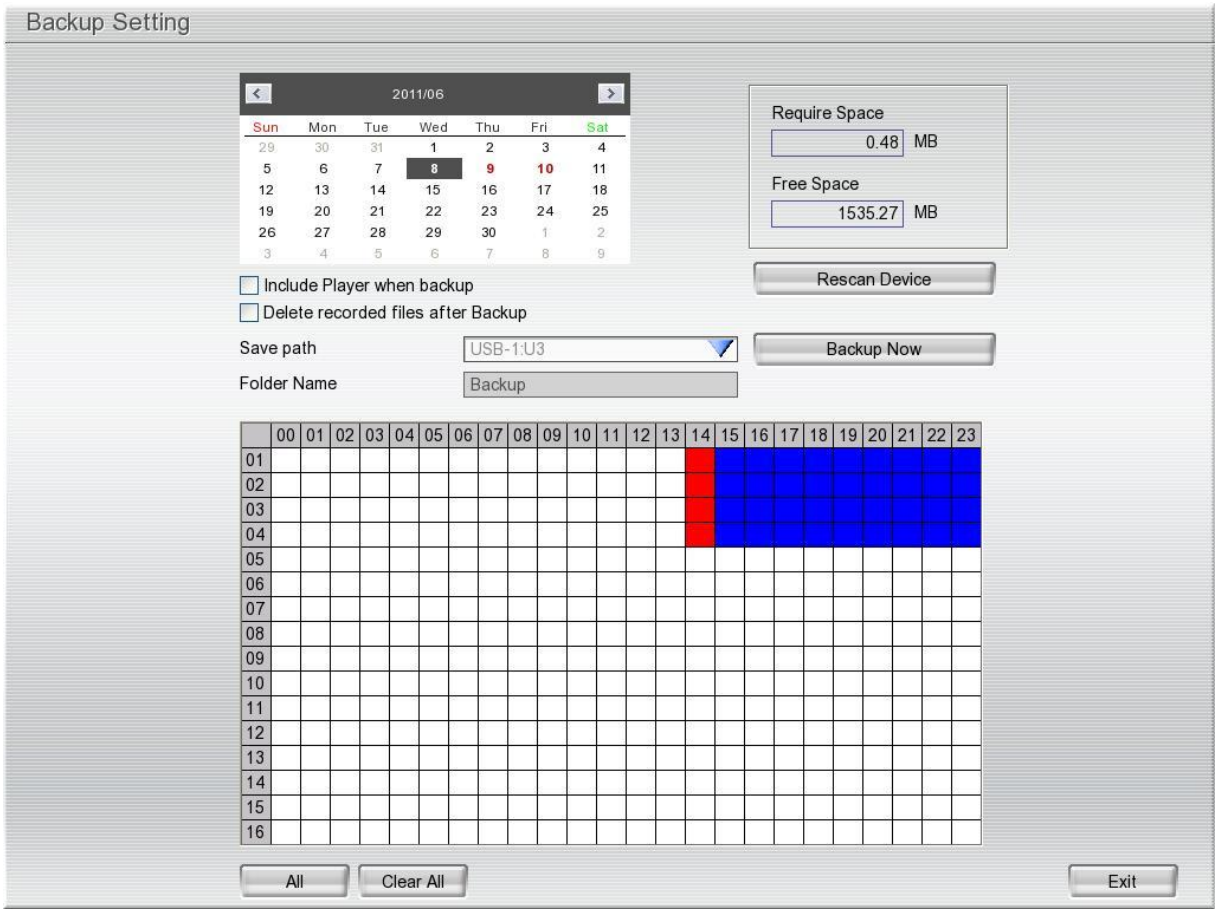
To Set the Schedule Setting:

1. Select the date in the calendar. Use ◂ and ▸ buttons to shift the calendar to the left or right.
2. Select the condition you want to schedule in the drop down list.
   - **Record**
     Activate all the cameras to start video recording at the set time based on the Recording setting
   - **Enable Network**
     Activate DVR remote system to access at the set time. After the appointed time, the Network function will be disabled. If the Network function is already enabled, the Network function will not be disabled when the appointed time has ended.
   - **Reboot**
     Restart the PC at the appointed time.
   - **Disable Alarm**
     Deactivate the alarm at the set time temporarily.
3. Set the schedule as weekly or one time. Click ⊙ to make a selection.
4. Click on the blocks to set the schedule or click **All** to select all. To un-select the specific schedule blocks, click the **Remove** and click blocks to un-select. To store the setting, click **Save**. To remove the settings, click **Clear**.
5. To end Schedule Setting, click **OK** to exit and accept the setting and **Cancel** to exit without saving the setting.

3.6 Backup Setup

While backup, the CPU usage will be near to 100% and might slow down the DVR system response.

In the Backup Setting dialog box, the number from 00 to 23 represent the time in 24-hour clock. The numbers from 01 to 08 represent the camera number. When you back up the file, if you mark **Include Player when backup** and you may find Qplayer application included in the backup folder. User need to execute the Qplayer installation on PC for playback (see also Chapter 3.6.1).

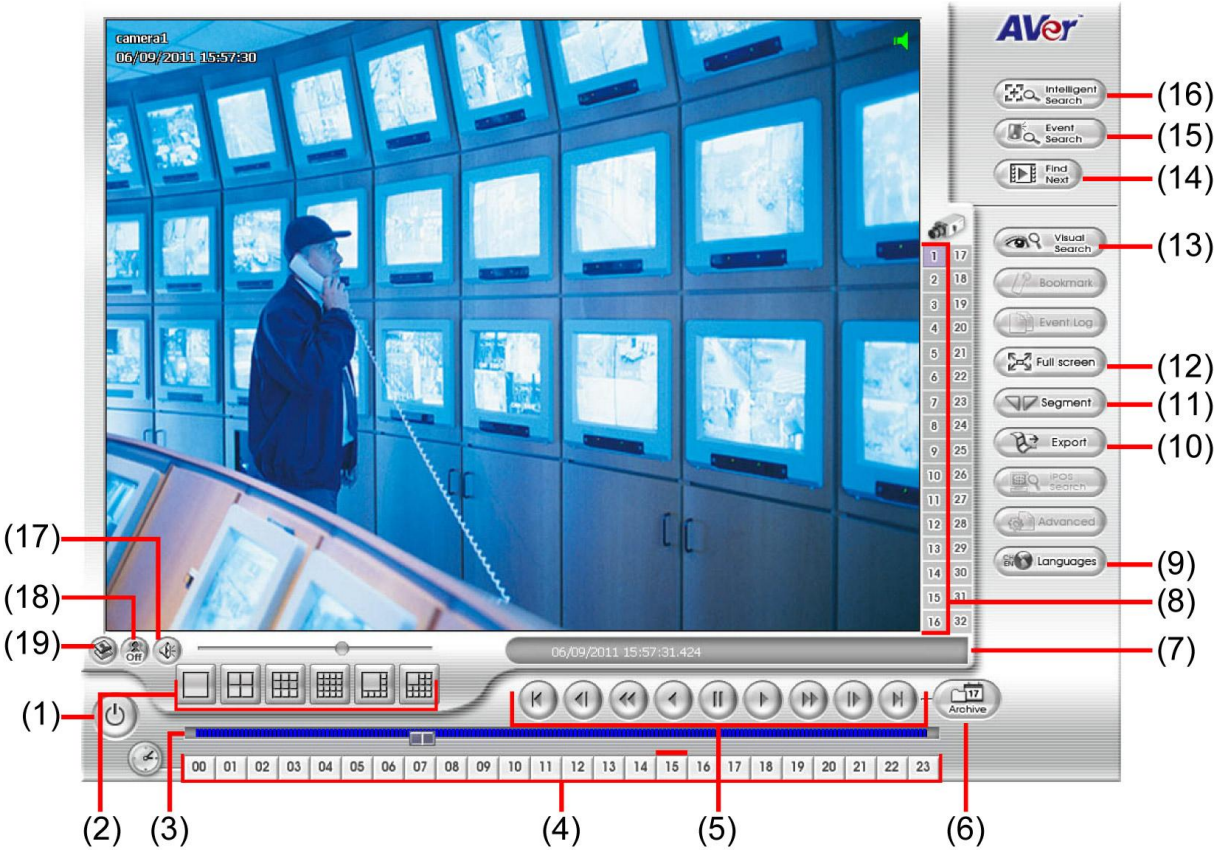


1. Select the date of the recorded file in the calendar you want to backup. Use ◄ and ► buttons to shift the calendar to the left or right.
2. In the table below, click on the blue block to select the recorded file or click camera (01~16) or time (00~23) to select the whole row or column. The blue block turns red when it is selected. The block that appears in white doesn't have data.
3. Check the space need for backup beside the calendar. Click **Rescan Device** to calculate the space for backup.
   - **Require Space**: Show the total size of the backup file.
   - **Free Space**: Show the available storage space
4. If user wants to include the Qplayer program in backup folder, mark the **Inculde Player when backup** check box. The Qplayer program will be in backup folder for playback using.
5. If you do **NOT** want to keep the recorded file in the storage folder, enable **Delete files after Backup** check box.
6. DVR system will give **Folder Name** automatically.
7. Click **Backup Now** button to start archiving the selected file.

3.6.1 Using QPlayer to Playback Backup Video

You can playback the backup files by using QPlayer applications on the PC. When you back up the recorded file, QPlayer applications are automatically included in the backup folder if user has enabled the selection of **Inculde player when backup** when backup recorded file. With QPlayer, it is the same as in Playback mode and supports different split screen types to view all the video at the same time. The only difference is that there are no Preview and Playback buttons.

To run the application, go to backup folder and double-click **Qplayer.exe**.

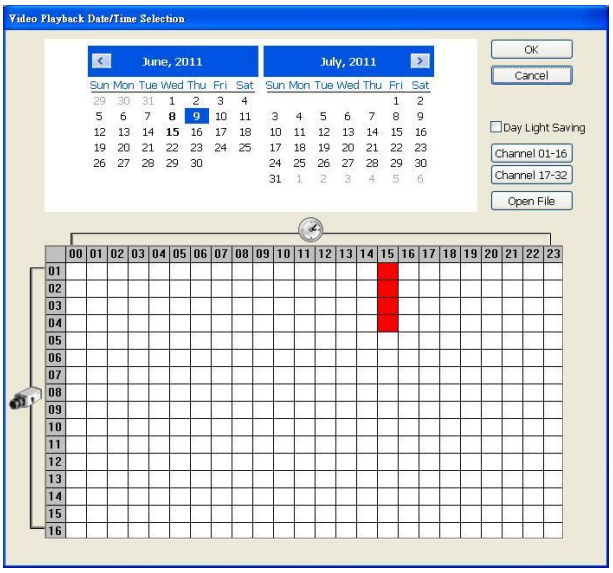


Name	Function
(1) Exit	To close the application
(2) Split Screen Mode	Select from 6 different split screen type to playback the recorded video file of all the camera, or one camera over the other or alongside on a single screen.

- If there are only 8 cameras, when user select 13 and 16-split screen mode, only 8 channels have the video display and rest of channels will be black screen.
- To zoom in an area on the screen, **Right** click and **Drag** a square on the area you want to enlarge.

(3) Progress bar	Show the progress of the file being played. You may move the bar to seek at any location of the track.
(4) Hour Buttons	Select and click to playback the recorded video file on the specific time frame.

The Hour buttons represent the time in 24-hour clock. The blue bar on top of the hour button indicates that there is a recorded video file on that period of time. While the red bar indicates that you are currently viewing the recorded video file.

Name	Function
(5) Playback Control Buttons	From left to right order: **Begin:** Move at the beginning of the recorded video file. **Previous:** Go back to the previous frame. **Slower:** Play the recorded video file at the speed of 1/2X, 1/4X, 1/8X, 1/16X, or 1/32X. **Rewind:** Wind back the recorded video file. **Pause:** Briefly stop playing the recorded video file. **Play:** Play the recorded video file. **Faster:** Play the recorded video file at the speed of 2x, 4x, 8x, 16x, or 32x. **Next:** Go to the next frame. **End:** Go to the end of the recorded video file.
(6) Archive	Select the date on the calendar and the time from 00 to 23 to where to start playing the recorded video file. − **OPEN FILE:** user can open the recorded file from HDD − **Channel 01~ 16**&**Channel 17 ~ 32:** If the channels are over 16, click button to switch to different channel group of playback calendar. − **Day Light Saving:** the playback calendar will show the available video records during day light saving time period. 

The numbers from 00 to 23 represent the time in 24-hour clock. The numbers from 01 to 16 represent the camera ID. The blue colored column indicates that there is a recorded video file on that period of time. While the red colored column indicates on where to start playing the recorded video file.

(7) Status bar	Display the recorded date, time and play speed.
(8) Camera ID	Show the number of cameras that are being viewed. When you are in single screen mode, click the camera ID number to switch and view other camera.
(9) Language	Customize the system to display the tool tips and dialogs based on the selected language. By default the language is in English.
(10) Export	Export includes Snapshot, Print, and Output Video Clip function. ■ **Snapshot:** Capture and save the screen shot either in *.jpg format. ■ **Print:** Print the screen shot. ■ **Output Video Clip:** Save the segmented file in *.dvr format.
(11) Segment	Keep a portion of the recorded video (see also Chapter 3.6.2).

Name	Function
(12) Full screen	View in full screen mode. To return, press the right button of the mouse or **ESC** on the keyboard or click the arrow icon. When you switch to full screen in multiple-screen mode, **Left** click to toggle to only display one of the video in the multiple-screen mode or all.
(13) Visual Search	Search from a specific camera by Date, Hour, Minute, 10 Seconds and Second(see also Chapter 3.6.3)
(14) Find Next	Search for the next event or changes in the motion detector frame. You can use this when you are using Intelligent Search or Event Search function.
(15) Event Search	Search from the recorded activities that were recorded in event log (i.e., Sensor, Motion, Video Loss). (See also Chapter 3.6.4)
(16) Intelligent Search	Search the changes in the motion detector frame (See also Chapter 3.6.5)
(17) Audio	Enable/disable volume
(18) De-interlace	To enhance the video quality. Set the de-interlace mode to #1, if you are capturing motionless picture and select #2, if it captures lots of movement.
(19) Watermark	To verify the output video segment has not been modified. Click to check the video. Watermark verification windows will show up as following: ■ **Green light:** Pass the watermark verification. ■ **Red light:** Fail the watermark verification or this video doesn't have watermark embedded. Watermark verification doesn't support the video that is recorded from IP camera.

3.6.2 To Cut and Save the Portion of the Recorded Video

1. Use the Playback Control buttons or drag the bar on the playback progress bar and pause on where you want to start the cut. Then, click **Segment** to set the begin mark.

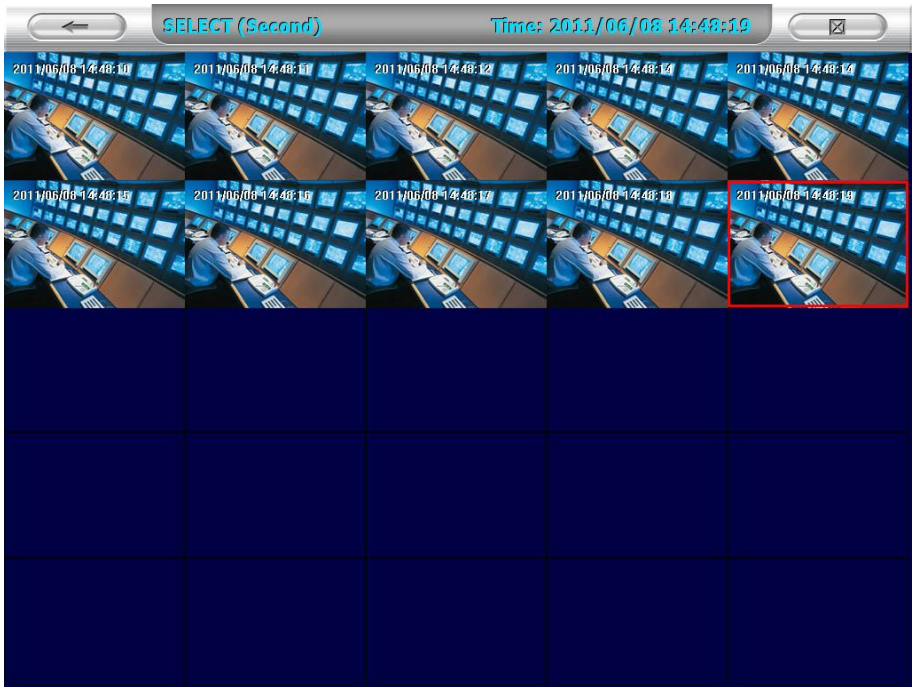
2. Use the Playback Control buttons or drag the bar on the playback progress bar and pause on where you want to end the cut. Then, click **Segment** to set the end mark. To cancel segmentation, click **Segment** button again.

3. Click **Export** > **Output Video Clip** button to save the wanted portion.
4. In the **Save As** dialog box, locate on where user wants to save the file, type the filename, and select the video format.

3.6.3 To Search Using the Visual Search

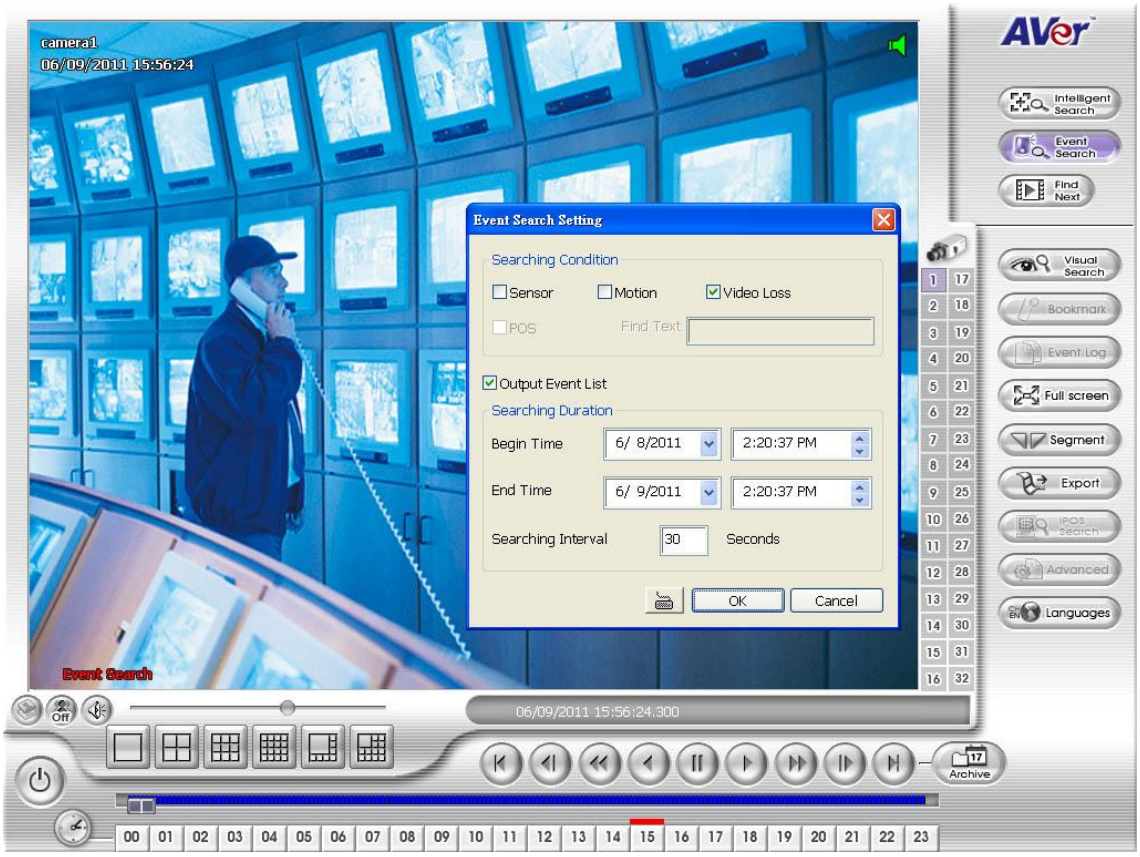
1. Click **Visual Search**.
2. In the Visual Search Setting dialog box, select the Camera number and the date. Then click **OK**.

3. When a series of frames appear by date, click on the frame to display another series of frames and search by every Hour of that date, every 3Minutes of that hour, every 10 Seconds of that minute, every Second of that 10 seconds. To go back, click . To view from the selected frame and close event search, click .



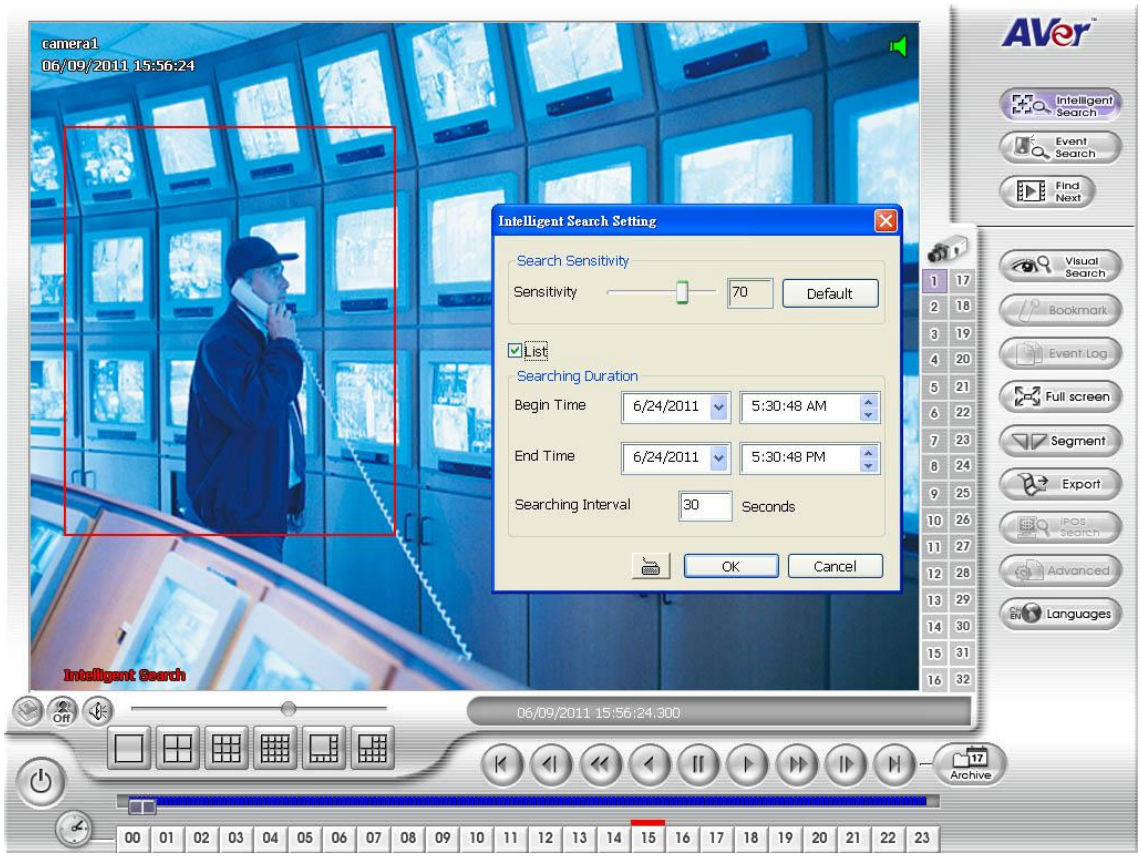
3.6.4 To Search Using the Event Search

1. Click on the video screen on where you want to search.
2. Click **Event Search**. The Event Search text (red) would appear at the lower left corner of the screen.
3. In the Event Search Setting dialog box, check the type of condition you want to search. The video search would stop at the frame that matches the condition. To keep on searching click **Find Next**( ) button.
4. You may also set to search and list all the result. In the **Search Duration** section, set the **Begin Time** and **End Time**. Set the **Searching Interval** time that system won't list out the same events in a period of time that user has setup. Then, click **OK** to start searching.
5. When the Event list appear, click and select the item you want to view.



3.6.5 To Search Using the Intelligent Search

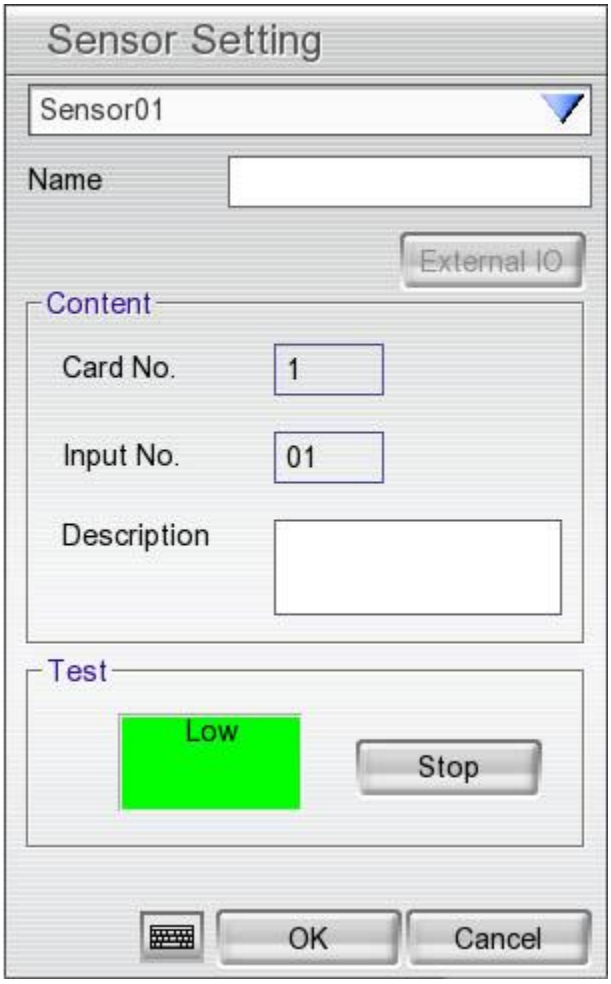
1. Click on the video screen on where you want to search.
2. Click **Intelligent Search**. The Intelligent Search text (red) would appear at the lower left corner of the screen.
3. When the Intelligent Search Setting dialog box and motion detector frame appear, you may adjust the sensitivity bar and the motion detector frame size and location. To set motion detector frame size and location, left click and drag on the screen. Then, click **OK** to start searching. The video search would stop at the frame that matches the condition. To keep on searching click. You may also set to search and list all the result. Just check the **List** box. In the **Search Duration** section set the **Begin Time** and **End Time**. Set the **Searching Interval** time that system won't list out the same events in a period of time that user has setup. Then, click **OK** to start searching.



3.7 Sensor Setting

The I/O device must be installed to use this function.

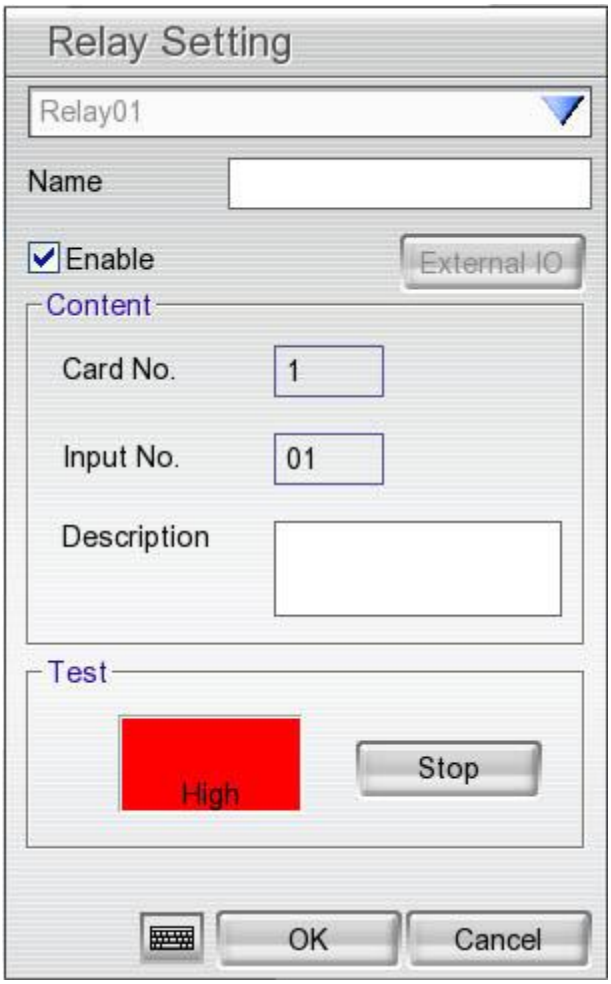
1. Click the drop-down list and select the sensor.
2. Enter sensor name in **Name** column.
3. The system automatically detects the card and input number. In the **Content** section, enter **Description** of sensor.
4. In the test section, click **Test** to check the sensor status. **Red** is high and **Green** is low.
5. Click **OK** to exit and accept the setting and **Cancel** to exit without saving the setting.



3.8 Relay Setting

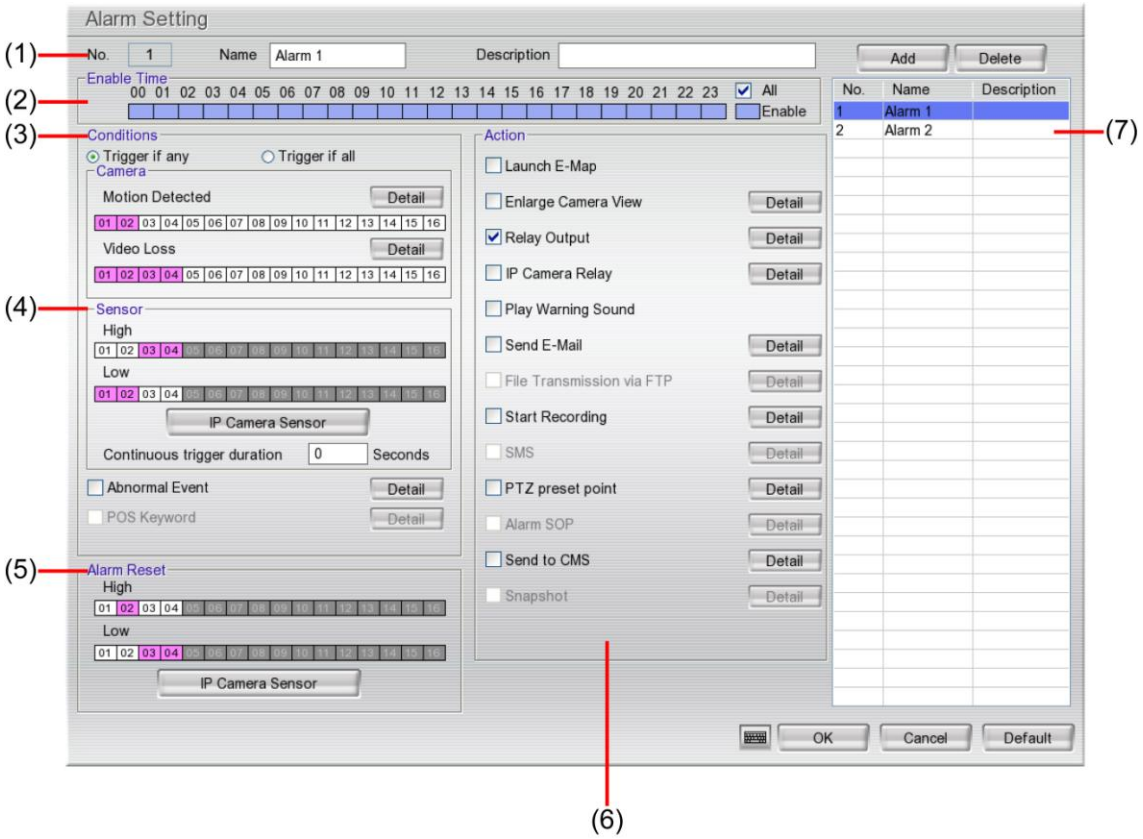
The I/O device must be installed to use this function.

1. Click the drop-down list and select the relay.
2. Enter relay name in **Name** column.
3. The system automatically detects the card and input number. In the Content section, enter **Description** of relay.
4. In the test section, click **Test** to trigger relay. **Red** is high and **Green** is low.
5. Click **OK** to exit and accept the setting and **Cancel** to exit without saving the setting.

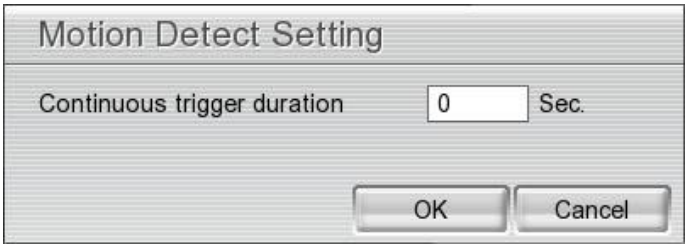


3.10 Alarm Setting

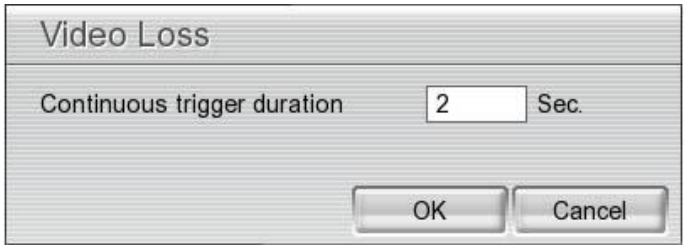
In the Alarm Setting dialog box, click **Add** to insert and set new alarm setting, click **Delete** to remove the selected alarm setting, click **OK** to exit and save the setting, **Cancel** to exit without saving. Click **Default** will back to factory default value.



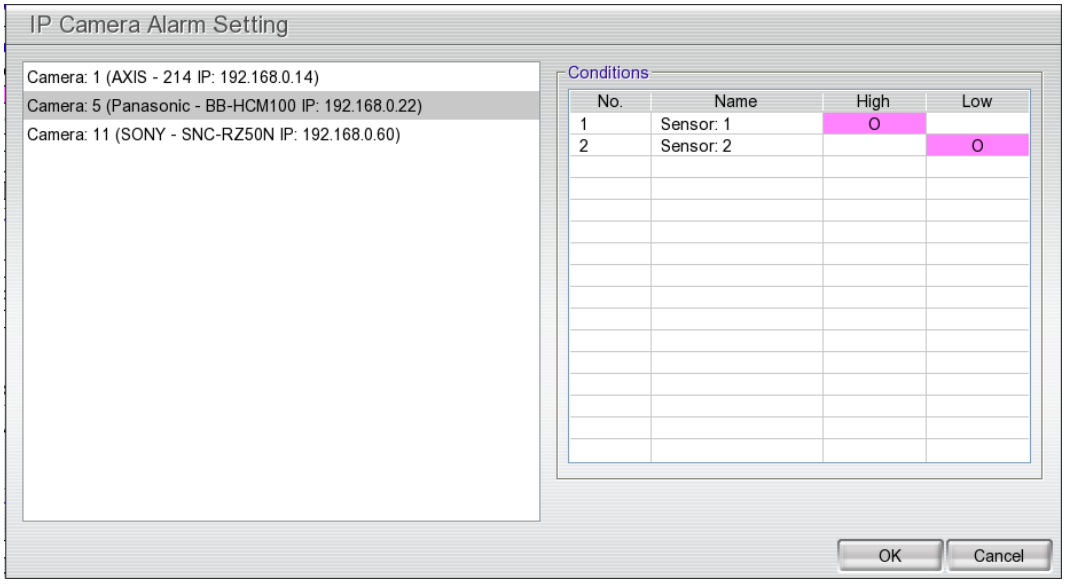
1. Click **Add** to insert and set a new alarm setting. Click the items in the **(7) Alarm Setting List** if you want to modify the alarm setting.
2. In **(1) No./Name/Description** enter alarm name and description. Alarm **No.** will be created by DVR system.
3. In **(2) Enable Time**, the number from 00 to 23 represent the time in 24-hour clock. Select the time and click the block you want to activate or deactivate the alarm function. When it is deactivated the color of the block turns white.
4. In **(3) Conditions**, you can set "**Trigger if any**" to activate if it falls to one of the conditions or "**Trigger if all**" to activate if it falls to all conditions.
5. In **Camera** section, select and click on the camera number (01 to 16) in **Motion Detected** and **Video Loss** to set the condition for the system to alarm.
   - **Motion Detected:** select and click on the camera number (01 to 16) to set the condition for the system to alarm. Click **Detail** button to setup the system to send out the alarm when motion is detected and last the time that user has entered in **Continuous trigger duration**.



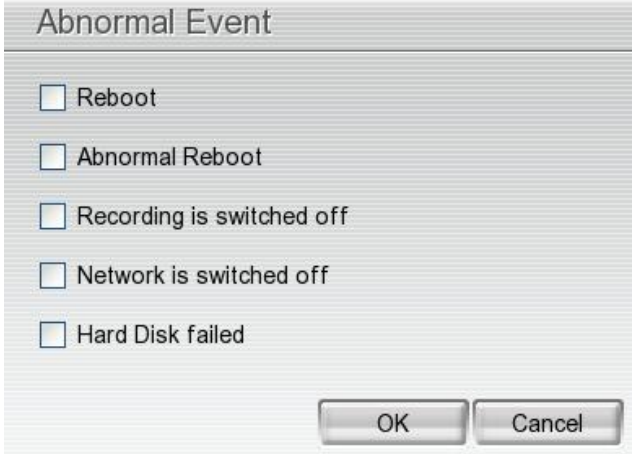
- **Video Loss:** click the camera number (01 to 16) to set the alarm condition when video is lost. Click **Detail** button to setup the system to send out the alarm when video is lost and status last the time that user has entered in **Continuous trigger duration**.



6. In **(4) Sensor**, select and click on the sensor number to set the condition for the system to alarm. If the sensor normal status is high, set the sensor condition to low.
   - **IP Camera Sensor:** To adjust sensor high/low that is connected on the IP camera.



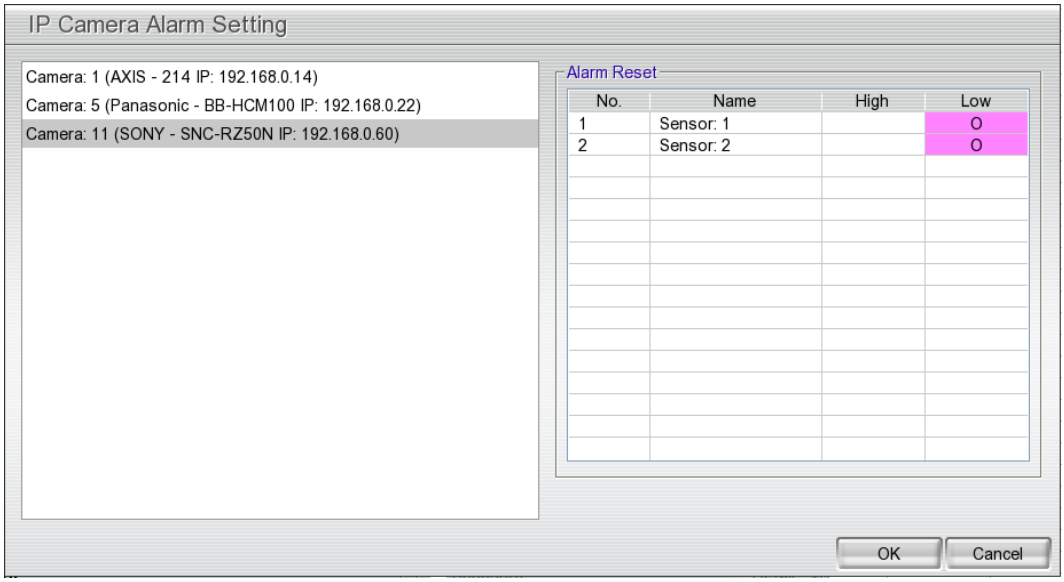
   - **Continue trigger duration:** Set a time period that when sensor has been trigger and stay in the same status for that period, then the alarm will be sent out.
   - Enable/disable the **Abnormal Event** check box, to set the condition of the event for system to alarm.



   - **Reboot:** when the DVR system reboot without abnormal condition, the system will send out the alarm message.
   - **Abnormal Reboot:** when the DVR system reboot in irregular condition, the system will send out the alarm message.
   - **Recording is switched off:** when the recording has been stopped, the system will send out the alarm message.

- **Network is switched off:** when the network connection of DVR system is lost, the system will send out the alarm message.
- **Hard Disk failed:** when the hard disk doesn't work normally, the system will send out the alarm message.

7. In **(5) Alarm Reset**, click the camera number to set the reset condition of alarm. Once alarm is reset, all alarm action will stop at the moment. If the sensor normal status is high, set the alarm reset condition to low. Click **IP Camera Sensor** to configure sensor status of IP camera. Click **High**/**Low** to set sensor status to high or low.

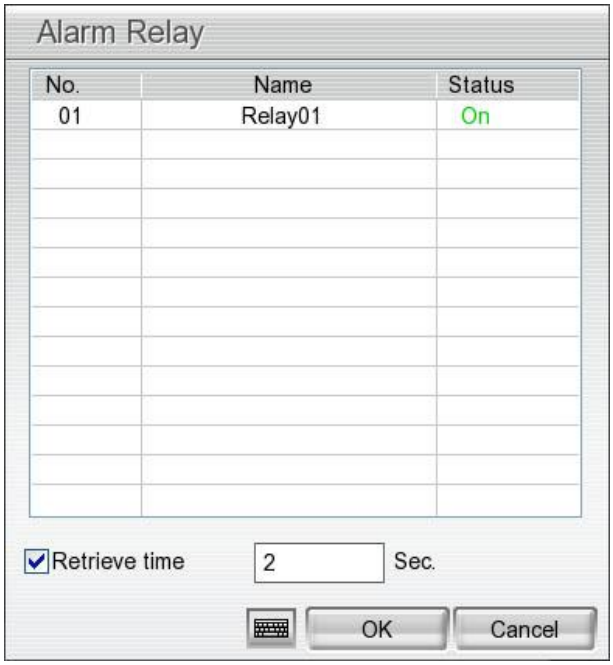


8. In **(6) Action**, you may now set the alarm action for the system to perform when the alarm condition is activated.
   - **Launch E-Map:** Display mini E-map screen.
   - **Enlarge Camera View**
     Switch to only display video in Preview mode from where the alarm is activated.
     a. Select the camera from drop down list to specify which camera video to be enlarged on screen when the alarm is triggered.
     b. **Retrieve time:** set the waiting duration before system switching back to original Preview mode. If the retrieve time is un-set, the alarm video will keep enlarging until user switch back to Preview mode manually. The retrieve time range is 0~ 600 seconds.

- **Relay Output**

  Set to enable/disable the relay operation when the alarm is activated and to extend additional time in second before it stops the relay operation.

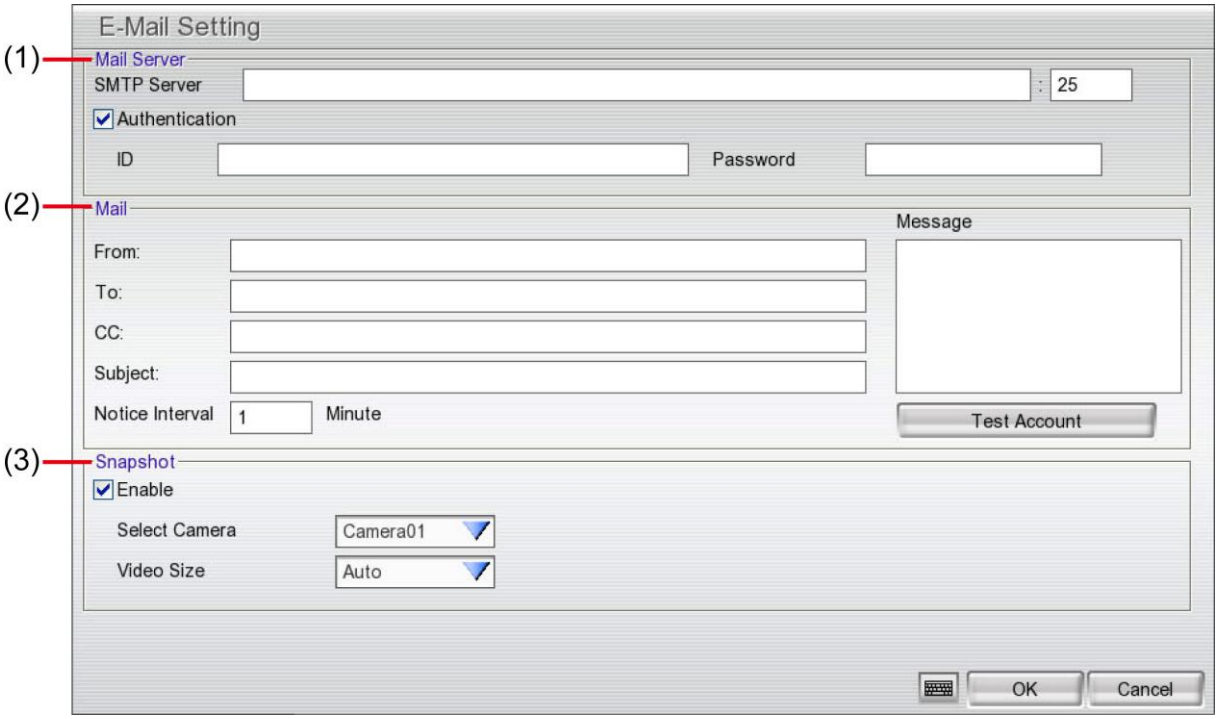
  1. Beside the Relay Output check box, click **Detail**.
  2. In the Alarm Relay dialog box, select from the available relay list and in the **Status** column, set to on/off the relay operation when the alarm is activated.
  3. In the **Retrieve time** check box, you may enable/disable to extend the relay operation time and set the duration in second(0 ~3600 seconds).
  4. Click **OK** to exit and accept the setting and **Cancel** to exit without saving the setting.



- **Send E-mail**

  Send an electronic text message. Beside the Send Email check box, click **Detail**.

  In the E-mail Setting dialog box, click **OK** to exit and save the setting and **Cancel** to exit without saving the setting.



(1) Mail Server

Enter the **SMTP Server** and **port**. If your e-mail system requires user identification, enable **Authentication** check box and enter **ID** and **Password**.

(2) Mail

Fill the mailing information. Click **Test Account** button can exam the mail is workable or not.

- ✓ **From:** Enter the sender e-mail address.
- ✓ **To and CC:** Enter the recipient email address and separate it with comma or a semicolon (;).
- ✓ **Subject:** Enter the message title.
- ✓ **Message:** Type the message.
- ✓ **Notice Interval:** Set a time gap for mail re-sending when mail has failed to send.

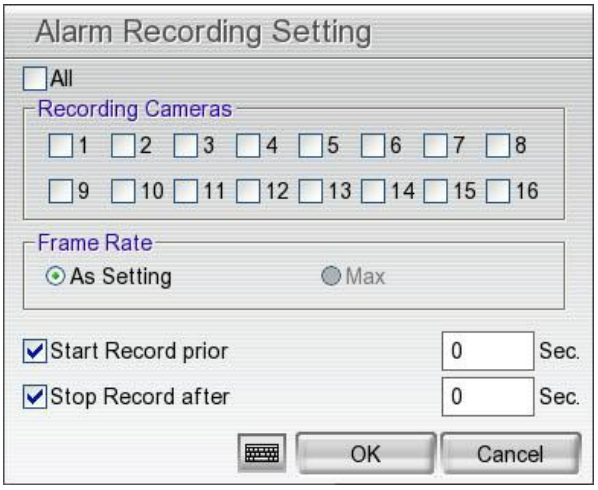
(3) Snapshot

When send out the email, the DVR system will snapshot image of the selected camera channel.

- ✓ **Select Camera:** Select the channel that will be snapshot when alarm email is sending out.
- ✓ **Video Size:** Select the size of video that will be taken when snapshot. Auto means default size that chosen by DVR system.

- **Start Recording**

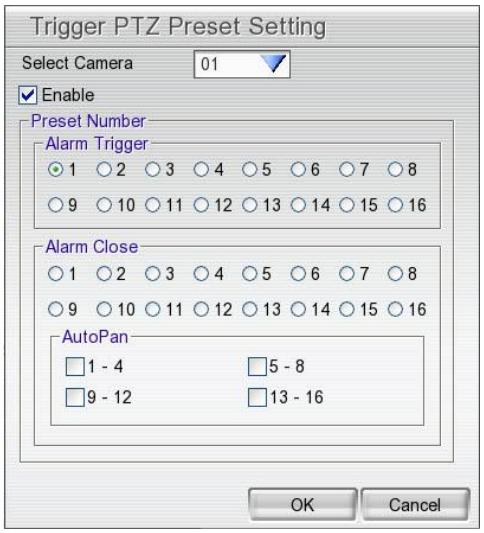
Record the video from the selected camera.



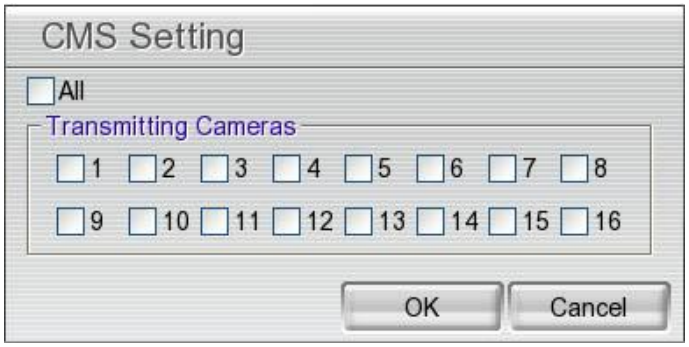
1. Beside the Start Recording check box, click **Detail**.
2. In the Alarm Recording Setting dialog box, select the camera to enable/disable video recording. Enable **All** to select all cameras.
3. In the Frame Rate selection, select **As Setting** to record the number of frames based on the Recording Setting.
4. In the **Start Record prior** text box, mark and set the number in second for the program to begin recording before the alarm has been trigger. The time range is 1~10 seconds.
5. In the **Stop Record after** text box, mark and set the number in second for the program to continue recording after the alarm has ended. The time range is 1~999 seconds. If user doesn't mark and set the time, the alarm recording will continue recording until alarm is reset.
6. Click **OK** to accept the new settings and **Cancel** to exit without saving.

- **PTZ preset point**

Position the PTZ camera based on the preset point setting. Beside the PTZ preset point check box, click **Detail**. In the Trigger PTZ Preset Setting dialog box, select the PTZ camera number then select the **Enable** check box. Select the position of the PTZ camera when the alarm is activated and ended. For the PTZ camera end point, user can also select on preset position or **Auto Pan** between preset position groups.



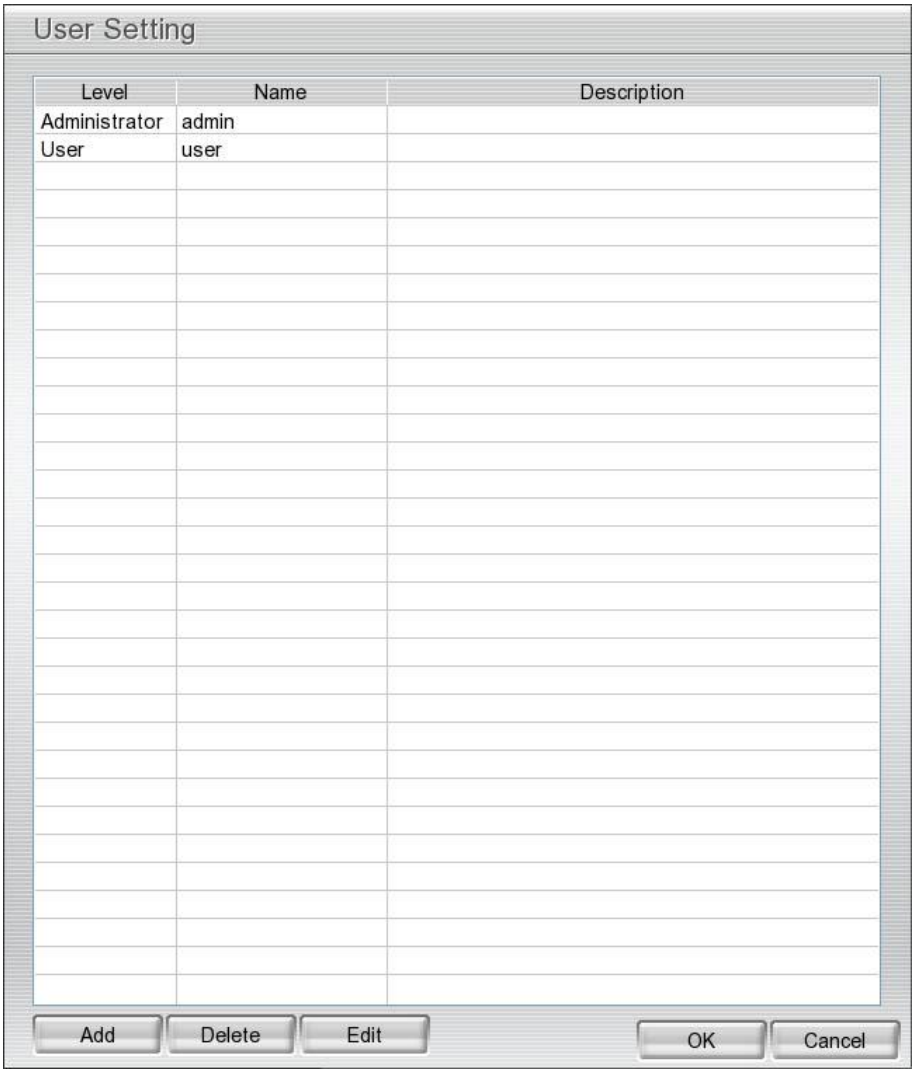
- **Send to CMS (Central Management System)**
  Enable/disable the selected camera to send video to CMS when the alarm is activated.
  Beside the Send to CMS check box, click **Detail**. In the CMS Setting, select the camera to enable/disable sending the video to CMS. Enable **All** to select all cameras. Then, click **OK** to accept the new settings and **Cancel** to exit without saving.



3.11 User Setup

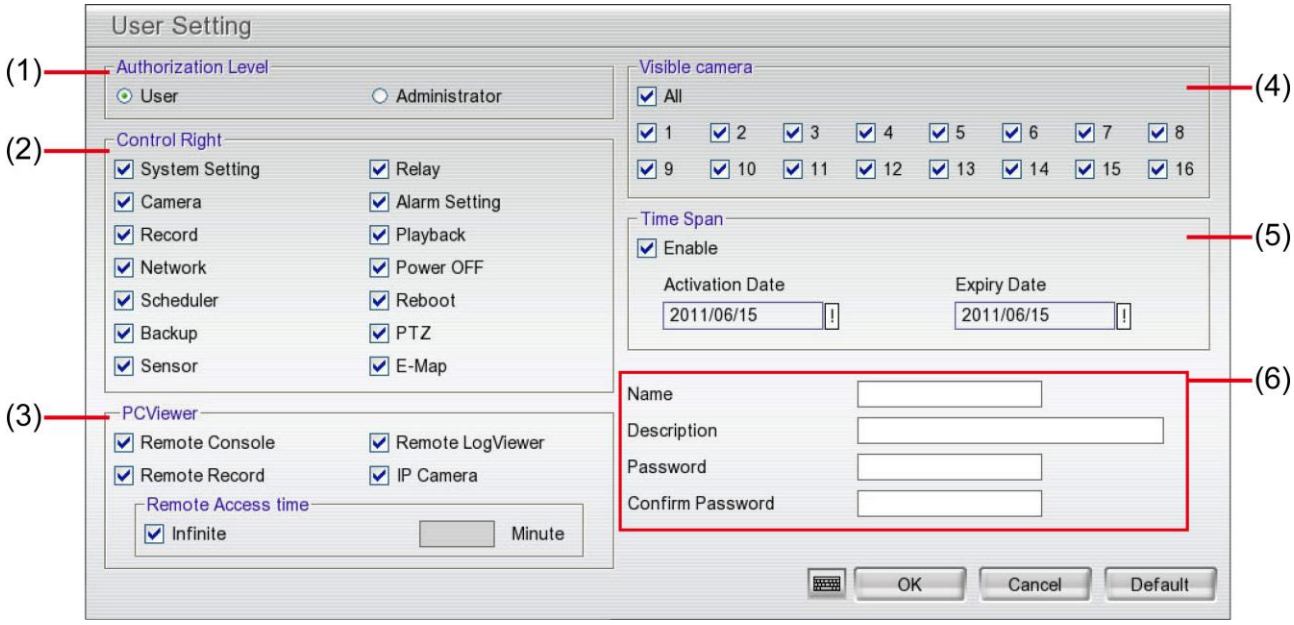
Only administrator level authority can access User Setting.

In the User Setting dialog box, click **Add** to insert a new user, **Delete** to remove the selected user, **Edit** to modify the user control right, **OK** to exit and accept the setting, and **Cancel** to exit without saving the setting.



To Add a User Account:

1. In the User Setting dialog box, click **Add**.
2. Select and fill in the following information.



(1) Authorization level

Select the status of the user.

(2) Control Right

Enable the items that would allow the user to access.

(3) PCViewer

Enable/disable Web Viewer control right that allow the user to operate from a remote location using internet explorer.

- **Remote Console**
  Allow the user to remote modify DVR system setting.
- **Remote Record**
  Allow the user to execute recording.
- **Remote LogViewer**
  Allow the user to view the event log from remote site.
- **IP Camera**
  Enable/disable user to add new IP camera when using the Web Viewer.
- **Remote Access Time**
  Enable **Infinite** check box to access DVR without time limit. If you want to set time limit, enter the number of minutes in **Minute** text box.

(4) Visible Camera

Select the camera number that would allow the user to access or view. To select all the cameras, enable the **ALL** check box.

(5) Time Span

Set the user account a specific time period that user only can use given account to login DVR program in that specific period. Mark **Enable** check box and select the **Activation Date** and **Expiry Date**.

(6) Name

Enter the user name.

Description

Enter the user description.

Password

Enter the user password.

Confirm Password

Enter the same user password for confirmation.

Chapter 4 Using the UPC to Playback Backup File

4.1 Recommended System Requirements

- ☐ Pentium®4 2.4GHZ or above
- ☐ Windows®2000/ XP/Vista/7(32 bit/64 bit)
- ☐ DDR 512 MB
- ☐ Graphic function must support DirectDraw
- ☐ Audio card or built-in
- ☐ Speaker
- ☐ 1 available USB2.0 port

4.2 Installing the USB Playback Console

To install the USB Playback Console:

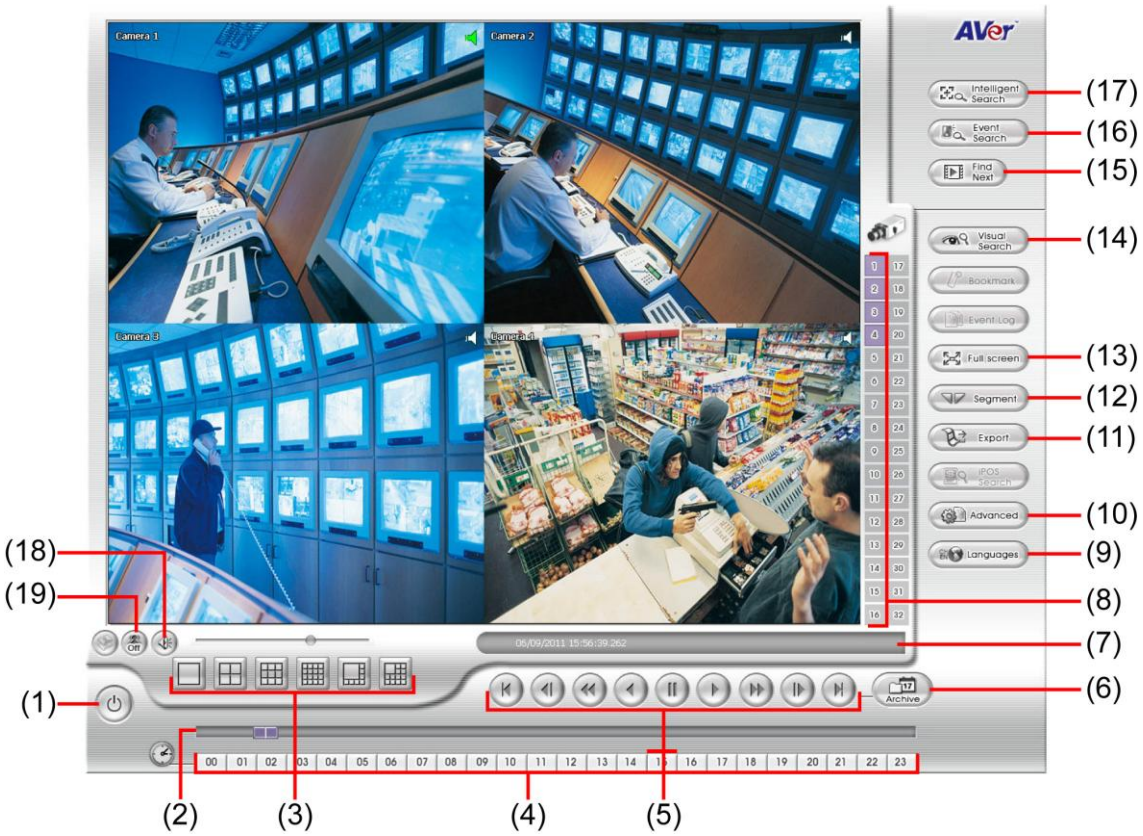
1. Place Installation CD into the CD-ROM drive. When the installation main screen appears, click **Install USB Playback Console** and then follow the on screen instructions

2. Select the language you prefer

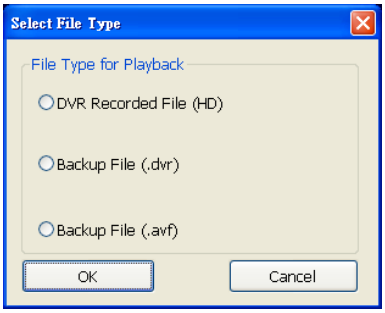
3. Click **OK** to install the application.
4. Click **Exit** to close the installation main screen.
5. You may now connect the external USB storage device that has saved recorded files to PC.

4.3 Familiarizing the Buttons in USB Playback Console

To run the application, click the icon on the PC desktop



Name	Function
(1) Exit	Close the application.
(2) Progress bar	Show the progress of the file being played. You may move the bar to seek at any location of the track.
(3) Split Screen Mode	Select from different screen view to playback the recorded video file of the entire camera or one camera on screen.
(4) Hour button	Select and click to playback the recorded video file on the specific time frame.
(5) Playback Controller	**Begin:** Move at the beginning of the recorded video file. **Previous:** Go back to the previous frame by frame. **Slower:** Play the recorded video file at the speed of 1/2x, 1/4x, 1/8x, 1/16x, or 1/32x. **Rewind:** Wind back the recorded video file. **Pause:** Briefly stop playing the recorded video file. **Play:** Play the recorded video file. **Faster:** Play the recorded video file at the speed of 2x, 4x, 8x, 16x, or 32x. **Next:** Go to the next frame by frame. **End:** Go to the end of the recorded video file.

Name	Function
(6) Archive	To select the video file source for playing.  – **DVR Recorded File (HD):** To playback the recorded video from the hard disk which was recording video on the DVR system. (see also Chapter 4.3.2) – **Backup File(.dvr):** The file is backup and save in *.dvr file format. (see also Chapter 4.3.3) – **Backup File (.avf):** The file is backup and save to external USB storage device in *.avf format. Select the file source folder and click **OK** to playback (EH1116H-4 Nano doesn't support *.avf file format).
(7) Status bar	Display the recorded date, time and play speed.
(8) Camera ID	Show the number of cameras that are being viewed. When you are in single screen mode, click the camera ID number to switch and view other camera.
(9) Language	To switch DVR application UI language.
(10) Advanced	Advanced function is including : ■ **HDD Backup:** to call out HDD Backup application. (see also Chapter 4.3.4) ■ **iEnhance:** to call out iEnhance application. (see also Chapter 6) ■ **AVF to AVI:** save *.avf file format as *.avi file format. ■ **HD eraser:** This function doesn't support on EH1116H-4 Nano DVR.
(11) Export	Export includes Snapshot, Print, and Output Video Clip function. ■ **Snapshot:** Capture and save the screen shot either in *.jpg or *.bmp format. ■ **Print:** Print the screen shot. ■ **Output:** Save the segmented file in *.avi format
(12) Segment	Keep a portion of the recorded video (see also Chapter 4.3.1)
(13) Full screen	Use the entire area of the screen to only display the video. To return, press the right button of the mouse or **ESC** on the keyboard. When you switch to full screen in multiple-screen mode, Left click to toggle to only display one of the video in the multiple-screen mode or all.
(14) Visual Search	Search from a specific camera by Date, Hour, Minute, 10 Seconds and Second(see also Chapter 4.3.5)
(15) Find Next	Search for the next event or changes in the motion detector frame. You can use this when you are using Intelligent Search or Event Search function.
(16) Event Search	Search from the recorded activities that take place in the system (i.e., Sensor, Motion, Video Loss, POS)(see also Chapter 4.3.6)
(17) Intelligent Search	Search the changes in the motion detector frame (See also Chapter 4.3.7)
(18) Sound /Sound bar	- Turn on and off the sound - Increase and decrease the volume
(19) De-interlace	To enhance the video quality. Set the de-interlace mode to #1, if you are capturing motionless picture and #2, if it captures lots of movement.

4.3.1 To Cut and Save the Portion of the Recorded Video

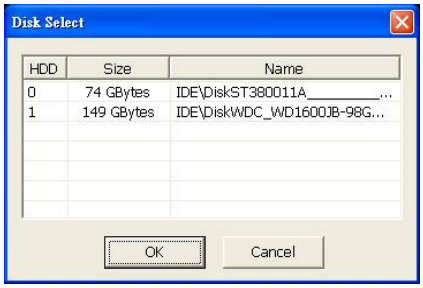
1. Use the Playback Control buttons or drag the bar on the playback progress bar and pause on where you want to start the cut. Then, click **Segment** to set the begin mark.

2. Use the Playback Control buttons or drag the bar on the playback progress bar and pause on where you want to end the cut. Then, click **Segment** to set the end mark. To cancel segmentation, click **Segment** button again.

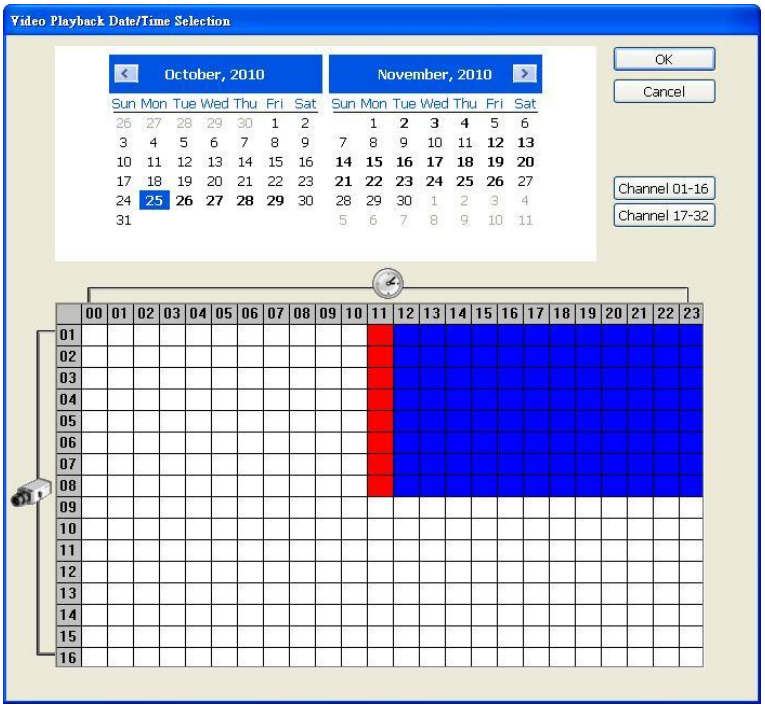
3. Click **Export** > **Output Video Clip** button to save the wanted portion.
4. In the **Save As** dialog box, locate on where user wants to save the file, type the filename, and select the video format.

4.3.2 Playback DVR Recorded File from Hard Disk

1. Please have the hard disk which containing of recorded video data install on your PC or using external USB enclosure to connect to your PC.
2. Click **Open File** button
3. Select **DVR Recorded File(HD)** and click **OK**.
4. Select the hard disk drive from **Select Disk** window and click **OK**.

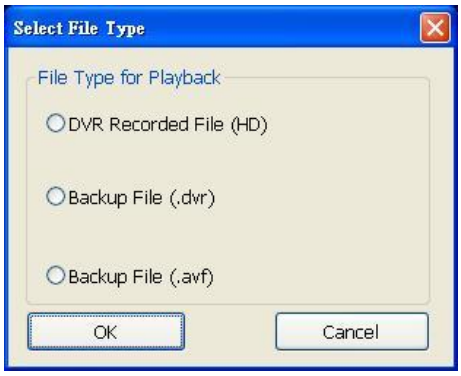


5. And then, Playback Date/Time Selection window appears. Select the date and time and click **OK**.

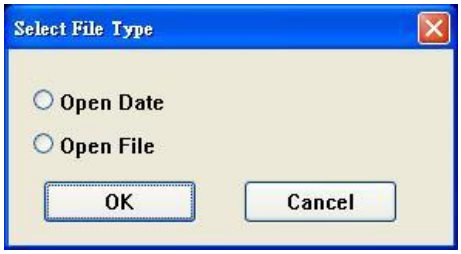


4.3.3 Playback Backup File(*.dvr)

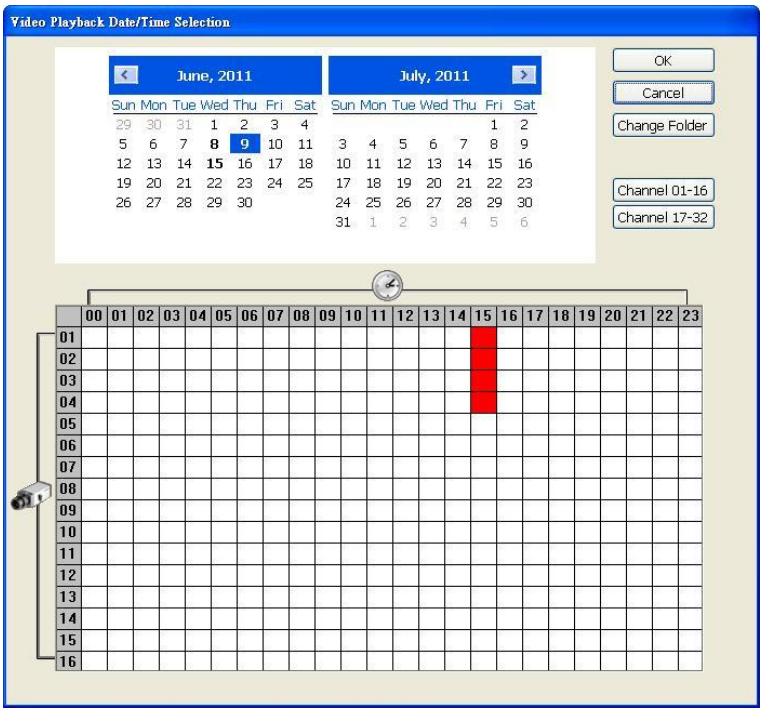
1. Click **Archive** button.
2. Select **Backup File(*.dvr)** and click **OK**.



3. The **Select File Type** window will show up. Select the way to open the backup file.



- **Open Date:** Open backup file by date. Located the backup file on local hard disk and select the date on calendar to playback.
  - ✓ **Change Folder:** To select different playback file form other folder location.
  - ✓ **Channel 01~ 16**&**Channel 17 ~ 32:** Switch to different channel group of playback calendar if the camera channel is more than 16 channels.



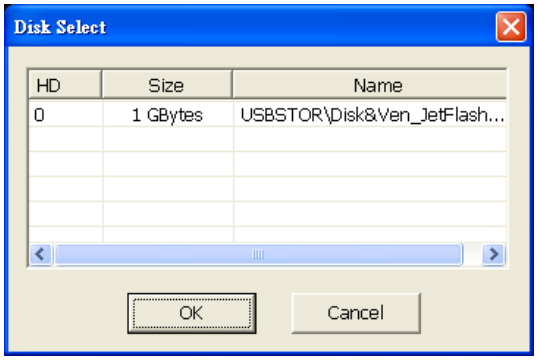
- **Open File:** Locate the backup file folder and click **OK**.

When open the backup video file, just locate the where backup file folder is.

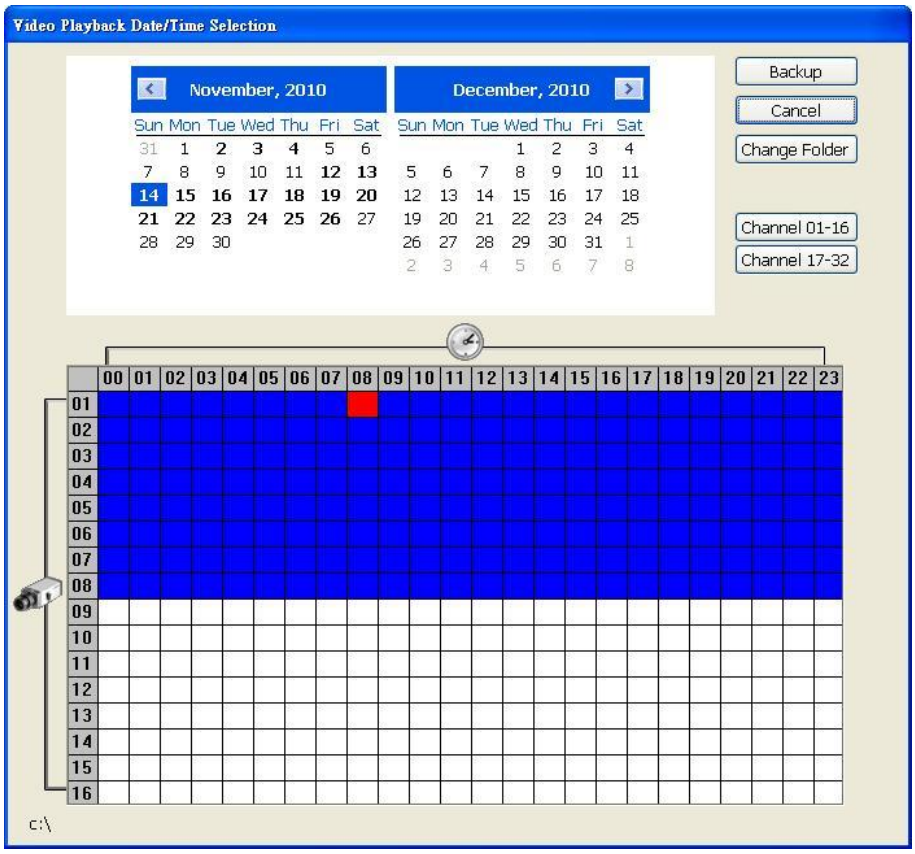
4.3.4 To Backup Recorded File

HDD backup function allows user to backup recorded file from hard disk.

1. Click **Advanced** → **HDD Backup** on USB Playback Console UI.
2. Select the source hard disk.



3. In Backup date/time selection windows, select the date and time. 00-24 represents hours and 01-08/01-04 represents channels. Blue block means there has recorded file. Red block means the block has been selected. Click-and-drag can select multiple blocks at once.

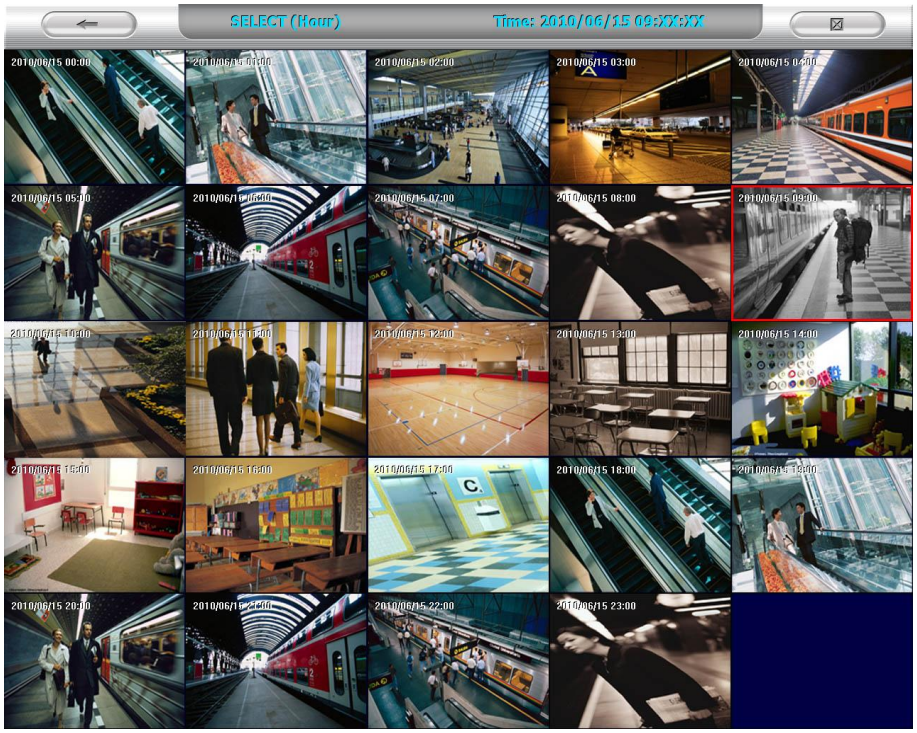


4. Click **Backup** to start backup file.
5. When backup complete, the complete information windows will display.

4.3.5 To Search Using the Visual Search

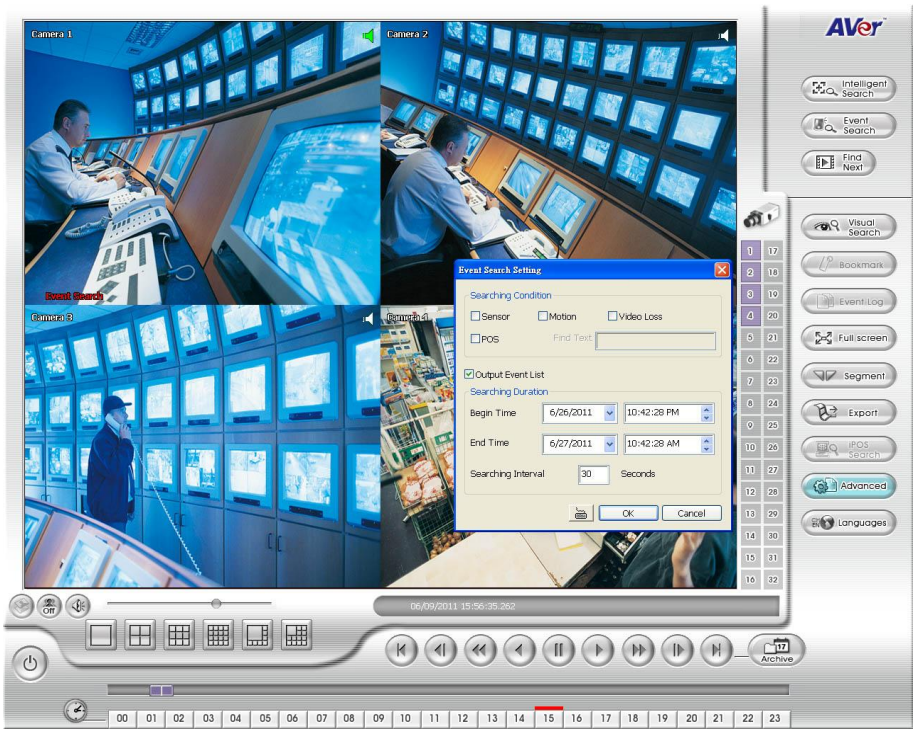
4. Click **Visual Search**.
5. In the Visual Search Setting dialog box, select the Camera number and the date. Then click **OK**.

6. When a series of frames appear by date, click on the frame to display another series of frames and search by every Hour of that date, every 3Minutes of that hour, every 10 Seconds of that minute, every Second of that 10 seconds. To go back, click . To view from the selected frame and close event search, click .



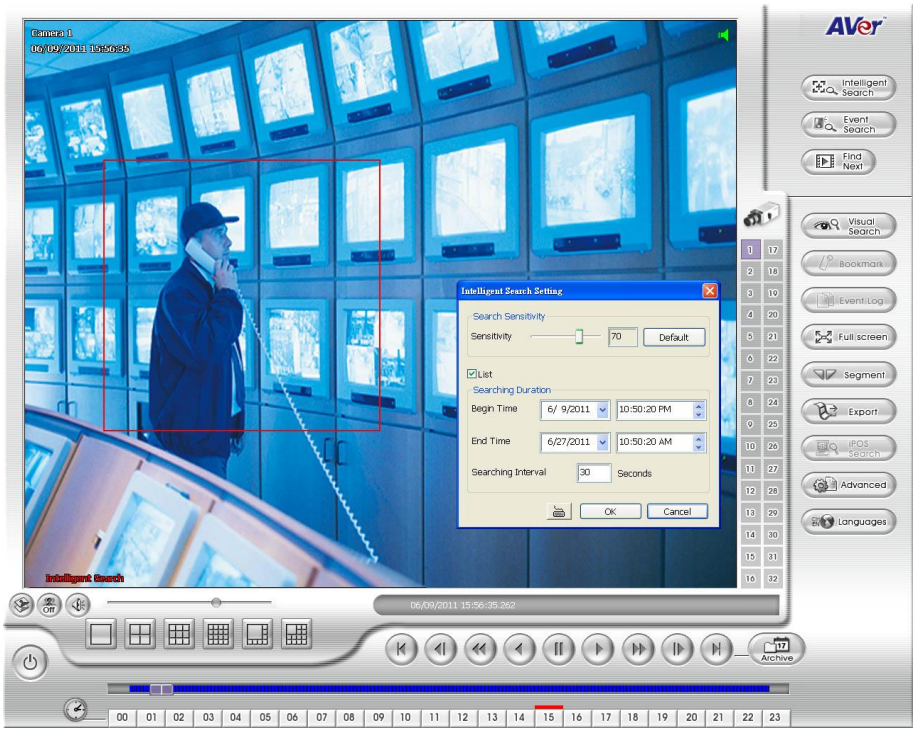
4.3.6 To Search Using the Event Search

1. Click on the video screen on where you want to search.
2. Click **Event Search**. The Event Search text (red) would appear at the lower left corner of the screen.
3. In the Event Search Setting dialog box, check the type of condition you want to search. The video search would stop at the frame that matches the condition. To keep on searching click **Find Next** (Find Next) button.
4. You may also set to search and list all the result. In the **Search Duration** section, set the **Begin Time** and **End Time**. Set the **Searching Interval** time that system won't list out the same events in a period of time that user has setup. Then, click **OK** to start searching.
5. When the Event list appear, click and select the item you want to view.



4.3.7 To Search Using the Intelligent Search

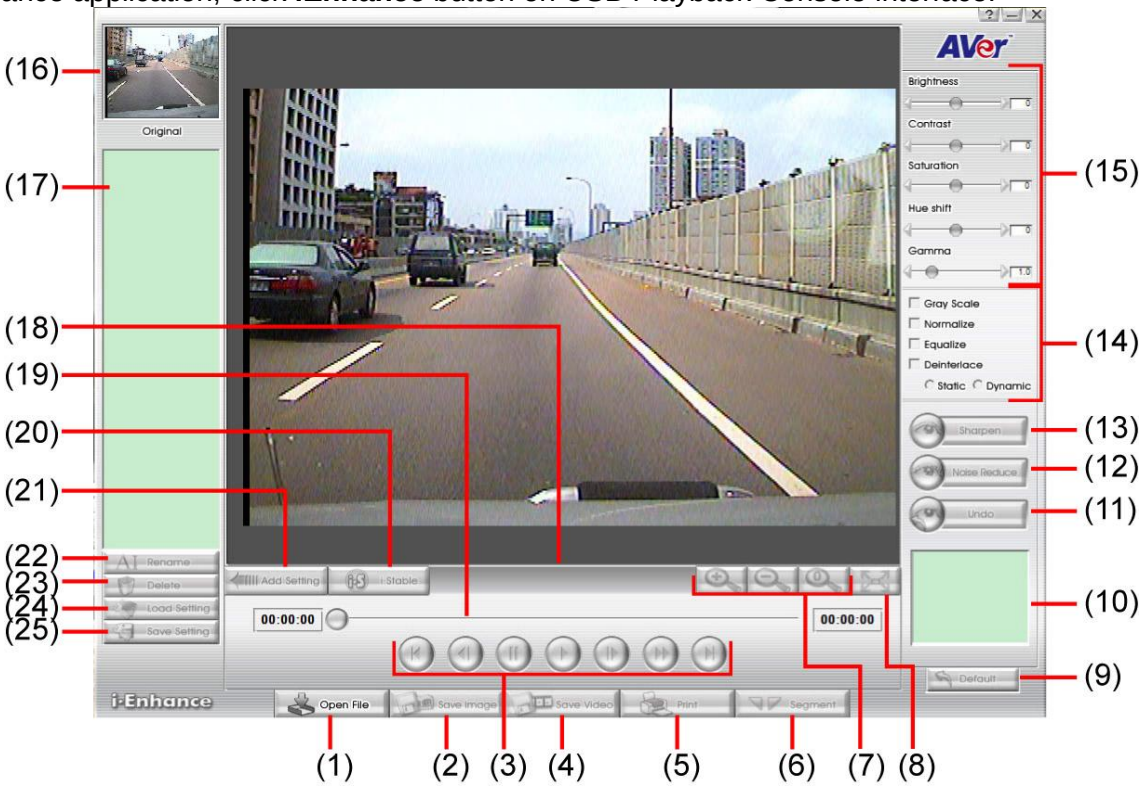
1. Click on the video screen on where you want to search.
2. Click **Intelligent Search**. The Intelligent Search text (red) would appear at the lower left corner of the screen.
3. When the Intelligent Search Setting dialog box and motion detector frame appear, you may adjust the sensitivity bar and the motion detector frame size and location. To set motion detector frame size and location, left click and drag on the screen. Then, click **OK** to start searching. The video search would stop at the frame that matches the condition. To keep on searching click **Find Next** ( ). You may also set to search and list all the result. Just check the **List** box. In the **Search Duration** section set the **Begin Time** and **End Time**. Set the **Searching Interval** time that system won't list out the same events in a period of time that user has setup. Then, click **OK** to start searching.



Chapter 5 iEnhance

The bundled iEnhance is a video editing tool and can only be used with *.dvr and *.avf video file. It allows you to adjust the video picture quality, segment and save the selected portion of the video, zoom in and out the image, and print or save the screen shot. You can also save the setting and apply it on other files.

To run iEnhance application, click **iEnhance** button on USB Playback Console interface.



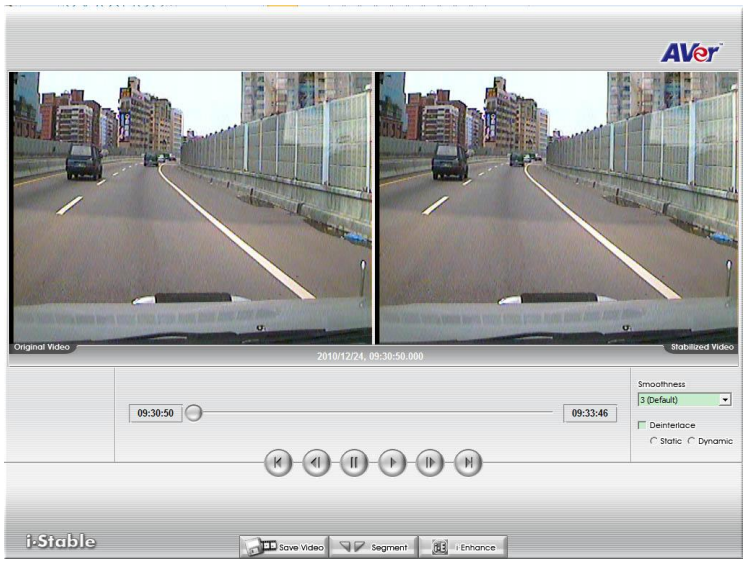
Name	Function
(1) Open File	Access *.dvr and *avf video file.
(2) Save Image	Capture and save the screen shot in *.bmp format.
(3) Playback Control Buttons	**Begin:** Move at the beginning of the video file. **Previous:** Go back to previous frame. **Pause:** Briefly stop playing the video file. **Play:** Play the video file. **Faster:** Play the video file at the faster speed. **Next:** Go to the next frame. **End:** Go to the end of the video file.
(4) Save Video	Save the edited or segmented video in *.avi format.
(5) Print	Print the screen shot.
(6) Segment	Mark the beginning and the end of the selected portion of the video. Two triangle marks will appear on the slider. To cancel video segmentation, click this button again.
(7) Zoom Buttons	Enlarge, reduce, and set the image back to normal size.
(8) Full Screen	Use the entire screen to only display the video.
(9) Default	Set the video back to original state and delete all the changes in the history box.
(10) History Box	List all the actions.
(11) Undo	Delete the last action.
(12) Noise Reduce	Adjust the softness and repair the damaged colors.

Name	Function
(13) Sharpness	Improve the overall image by enhancing edges. This gives the image more depth.
(14) Effects	■ **Gray Scale:** convert the image into black and white (monochrome). ■ **Normalize:** adjust the brightness intensity. ■ **Equalize:** automatically adjust the images that are too dark. ■ **De-interlace:** smooth out the overlying frames. - **Static:** de-interlace for motionless scene. - **Dynamic:** de-interlace for moving scene.
(15) Picture Adjustment	Adjust the Brightness, Contrast, Saturation, Hue and Gamma.
(16) Original Screen	Display the original state of the image.
(17) Temporary Setting Block	Display the sample settings. Click the sample to apply the setting on the current video.
(18) Status Bar	Display the date, and time of the video.
(19) Progress Bar	Show the progress of the file being played. You may move the bar to seek at any location of the track.
(20) iStable	To reduce the jolt in the recorded video.(also see Chapter 5.1)
(21) Add Setting	Include the new setting to the temporary setting block.
(22) Rename	Change the name of the selected setting in the temporary setting block.
(23) Delete	Permanently remove the selected setting in the temporary setting block.
(24) Load Setting	Call the saved settings.
(25) Save Setting	Store the settings in the temporary setting block.

5.1 To Use iStable

The iStable function can reduce the jolt in the recorded video.

1. Click **Open File** button and select the recorded video.
2. And then, click **iStable** button.
3. iStable windows will show up.
4. Select the **smoothness** level – 1(Low), 2, 3, 4, and 5(High). The default value is 3.
5. Click Play button, and then iStable function will start to initial the recorded video.
6. When the initialize is done, user will see the original and stabilized recorded video play in two windows. The original video on the left side of window and the stabilized video on the right side of window.



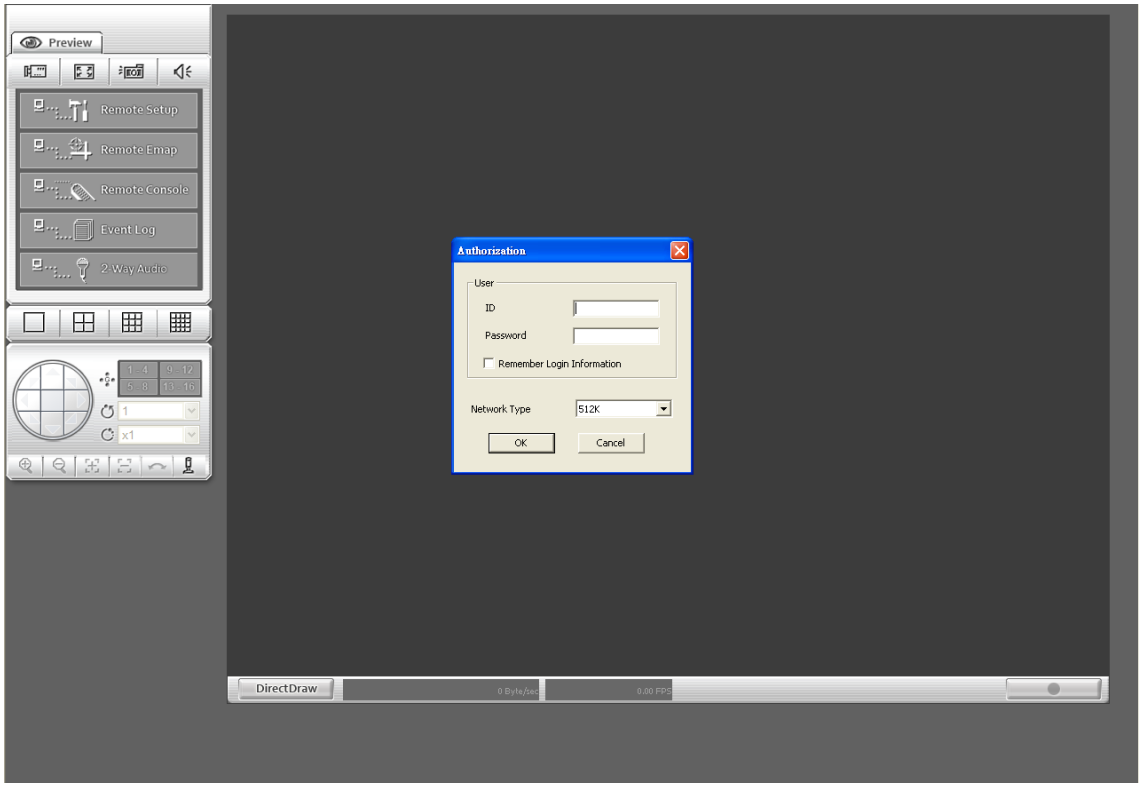
Chapter 6 Using the Remote Programs

User can use Microsoft Internet Explorer to access DVR system by entering the IP address. To use this feature, make sure that your PC and DVR server both are connected to the internet and the Network feature is enabled.

Accessing this feature for the first time you will be prompted by your browser to install WebCamX.cab, allow the installation and you should be able to connect and login afterwards.

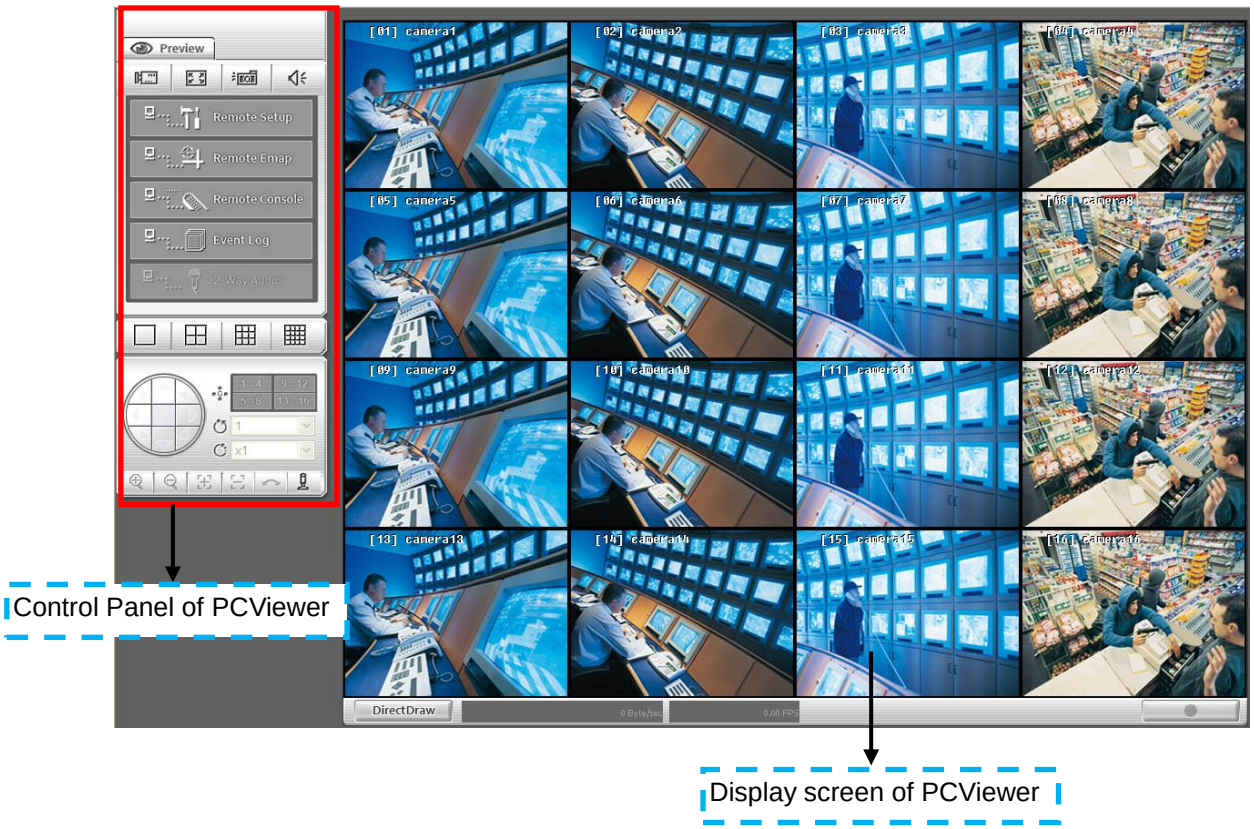
For Windows XP/Vista/7, click Install when the Internet Explorer - Security Warning dialog box appears.

After installing the WebCamX.cab and when connecting to the DVR system, you are required to enter account ID (default is **admin**) and password (default is **admin**) and select the type of network. **Admin** account has the authority to remote setup the DVR system configuration on PCViewer.



- Changing account password is strongly recommended.
- To have smooth remote frame rate, it's suggested to connect DVR by selecting **WAN (512K/64K)** as the Network Type on PCViewer.
- To operate full remote function, please use "Administrator" account to execute IE browser.

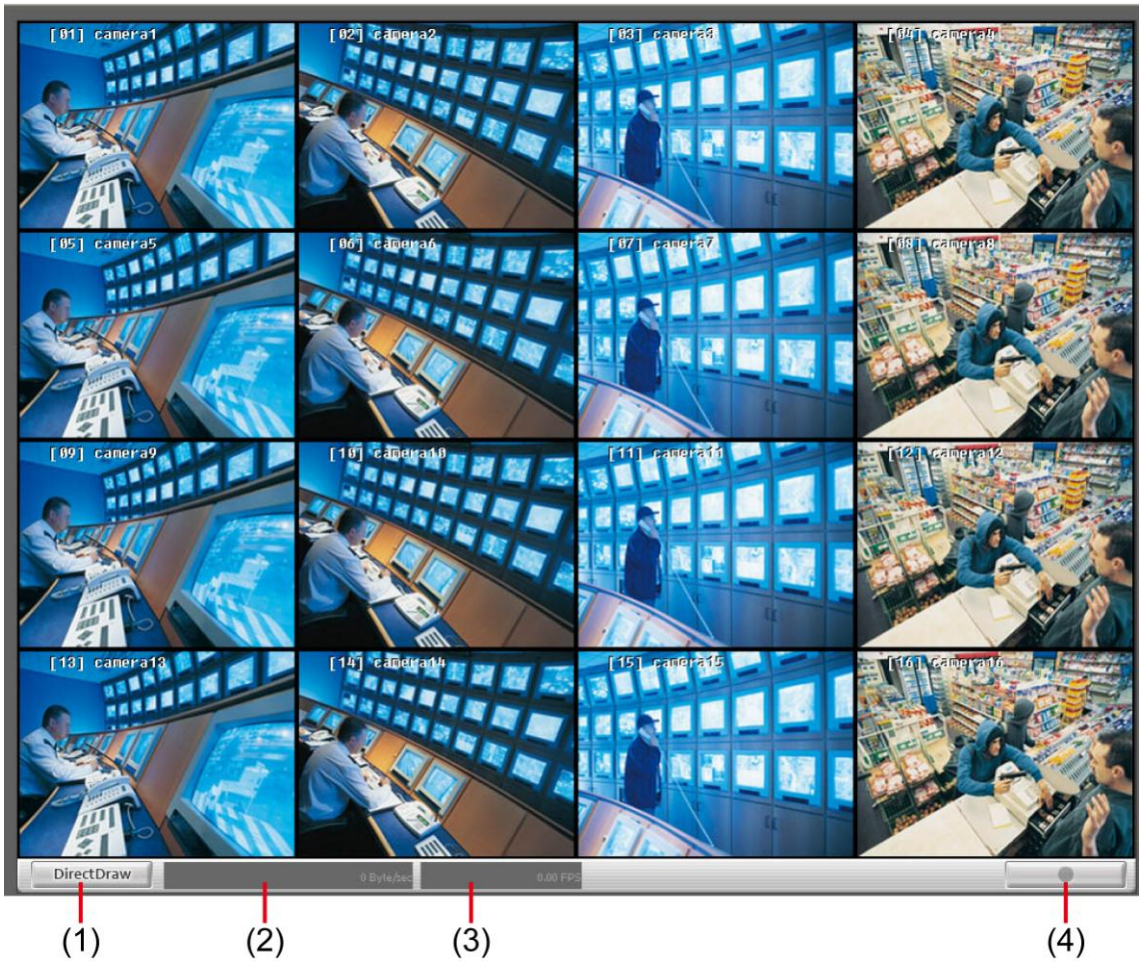
After login, the PCViewer interface is displayed.



6.1 Familiarizing the Buttons in PCViewer

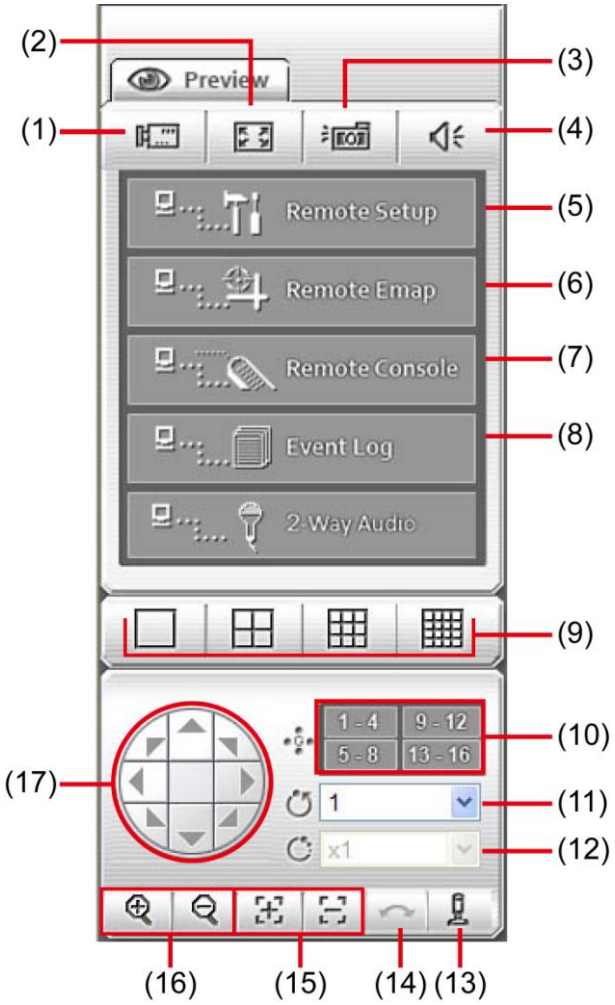
6.1.1 PCViewer Screen

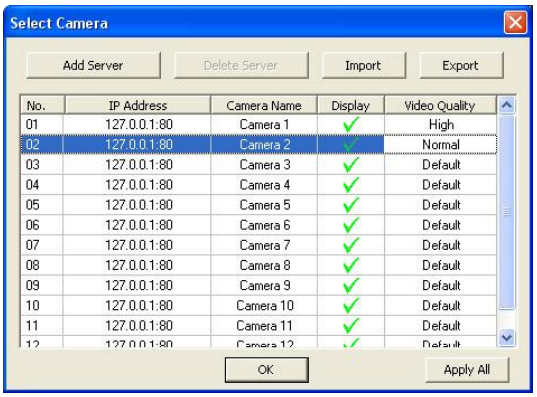
Right-clicking on the PCViewer video screen, enables you to start video recording, change video quality, switch camera and enable/disable DirectDraw.



Name	Function
(1) DirectDraw	Enhance the video quality.
	Not all graphic cards can support this function. If you cannot see the screen display correctly or screen is messed, please check with VGA card vendor.
(2) Received file size	Indicate the size of the data being sent per second.
(3) Camera frames	Indicate the number of frames per second.
(4) Record	Start to record the video of the selected camera in AVI format. Directly click screen to select the channel that user wants to record and press **Record** button.

6.1.2 PCViewer Control Panel

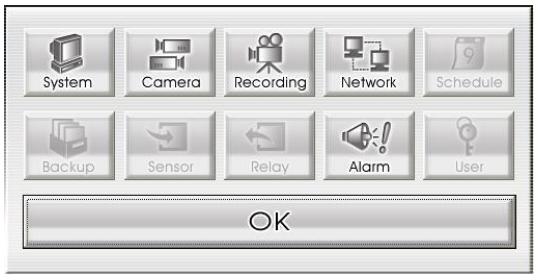


Name	Function
(1) Select cameras to view	Select to the view camera from different server. In Select Camera dialog box, Display column, click to enable/disable viewing the camera. Click **Add Server** and select the server type between DVR and IP Cam to add. Click **Delete Server** to delete the selected item. Click **Import** to load the previous saved list. Click **Export** to save the list. Click **Apply All** to change all the camera video quality based on the selected setting. Click **OK** to exit. 
(2) Full screen	Use the entire area of the screen to only display the video. To return, Right click the mouse or press ESC on the keyboard.

Name	Function
(3) Snapshot	Capture and save the screen shot in *.bmp format.
(4) Audio	Enable/disable remote sound.
(5) Remote setup	Change the DVR server settings (see also Chapter 6.1.3)
(6) Remote Emap	To call out the Emap of remote DVR server to view.
(7) Remote Console	Initiate Remote Console. It allows you to control DVR server (see also Chapter 6.2).
(8) Event Log Viewer	Display the Event logs, Operation logs, System logs, and Network logs.
(9) Split screen view	Select from four different split screen types to view all the cameras.
(10) Auto Pan Group	Operate the PTZ cameras automatically based on the selected camera group preset position number.
(11) Camera preset position number	Move the PTZ camera to the preset point.
(12) Direction buttons' moving speed	Adjust the moving speed of the PTZ camera lens. This speed will apply to the **(18) Direction buttons**' moving speed only.
(13) Select PTZ	Choose to enable/disable the PTZ camera. In the Select PTZ dialog box, Select column, click to enable/disable viewing and controlling the PTZ camera. Click **OK** to exit and save the setting and **Cancel** to exit without saving the setting.
(14) Atuo Pan	Operate the PTZ cameras automatically based on the selected camera group preset position number.
(15) Zoom +/-	Zoom the image in or out.
(16) Focus +/-	Adjust the focus manually to produce clear image.
(17) Direction Buttons	Operate the PTZ cameras automatically based on the selected camera group preset position number.

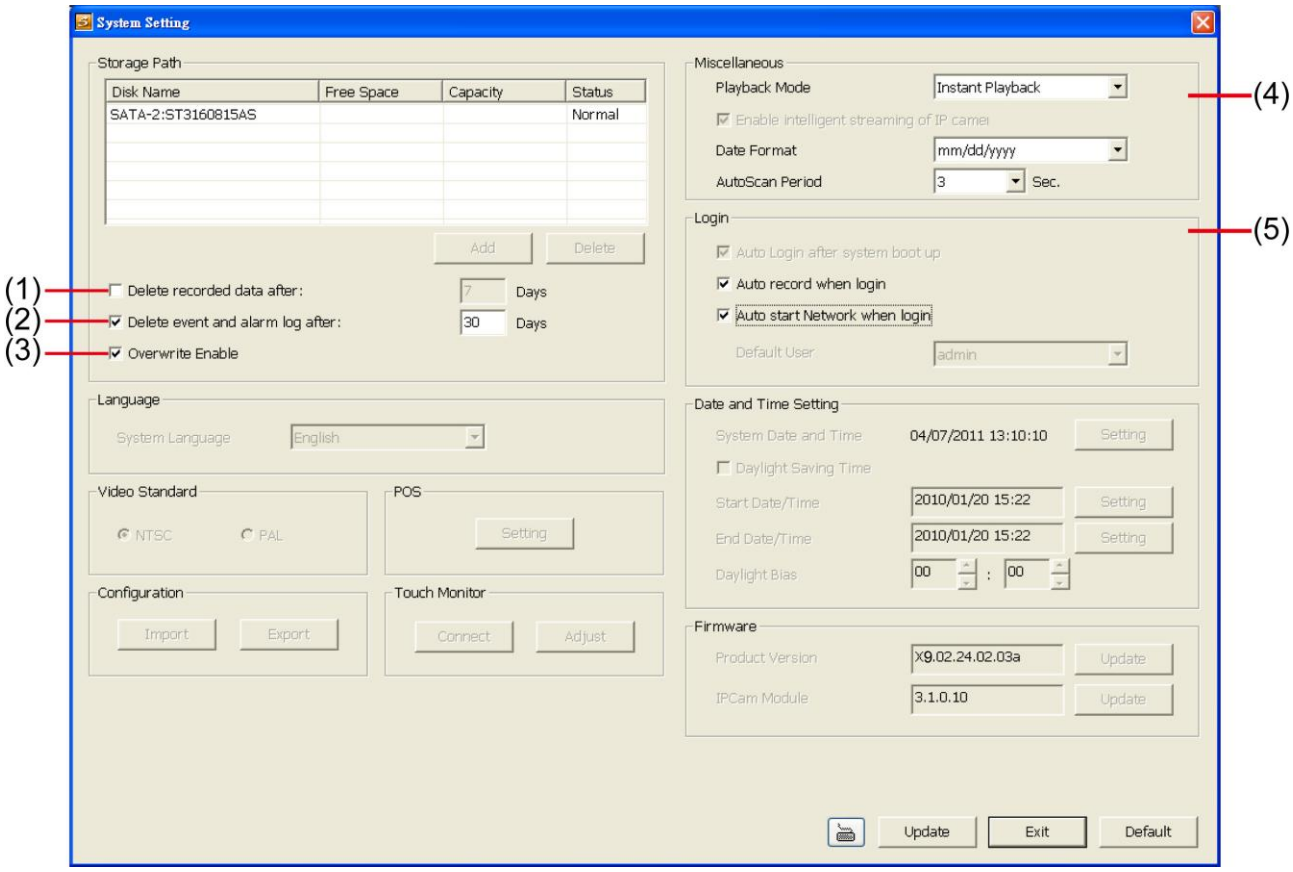
6.1.3 To Setup Remote System Setting

The setting here applies to Remote DVR only. Select function to configure.



6.1.3.1 System Setting

In the System Setting windows, click **Update** to accept the new settings, click **Exit** to exit without saving, and click **Default** to revert back to original factory setting.



(1) Delete recorded data after

If you want the system to automatically erase the data after a certain days, enable the **Delete recorded data after** check box and enter the numbers of days in **Days** text box.

(2) Delete event and alarm log after

If you want the system to automatically erase the event and alarm log files after a certain days, enable the **Delete event and alarm log after** check box and enter the numbers of days in **Days** text box.

(3) Overwrite Enable

When there is not enough free space to record one hour data, the system automatically replaces the oldest data.

(4) Miscellaneous

Enable the conditions in **Miscellaneous** section you want the system to perform.

- **Playback Mode**
  Select the mode of playback the video.
  - **Select date and time:** Select the date and time which user wants to playback.
  - **Play the last file:** Automatically playback the video from the last hour
  - **Instant Playback:** Automatically playback the video which has just recorded
- **Date Format**
  Select the date format which wants to display in **Select date and time** playback mode
- **Auto Scan Period**
  Set the time gap of the Auto Scan function from 3 to 10 seconds. This automatically switches to the next video in cycle depending on the set time gap.

(5) Login

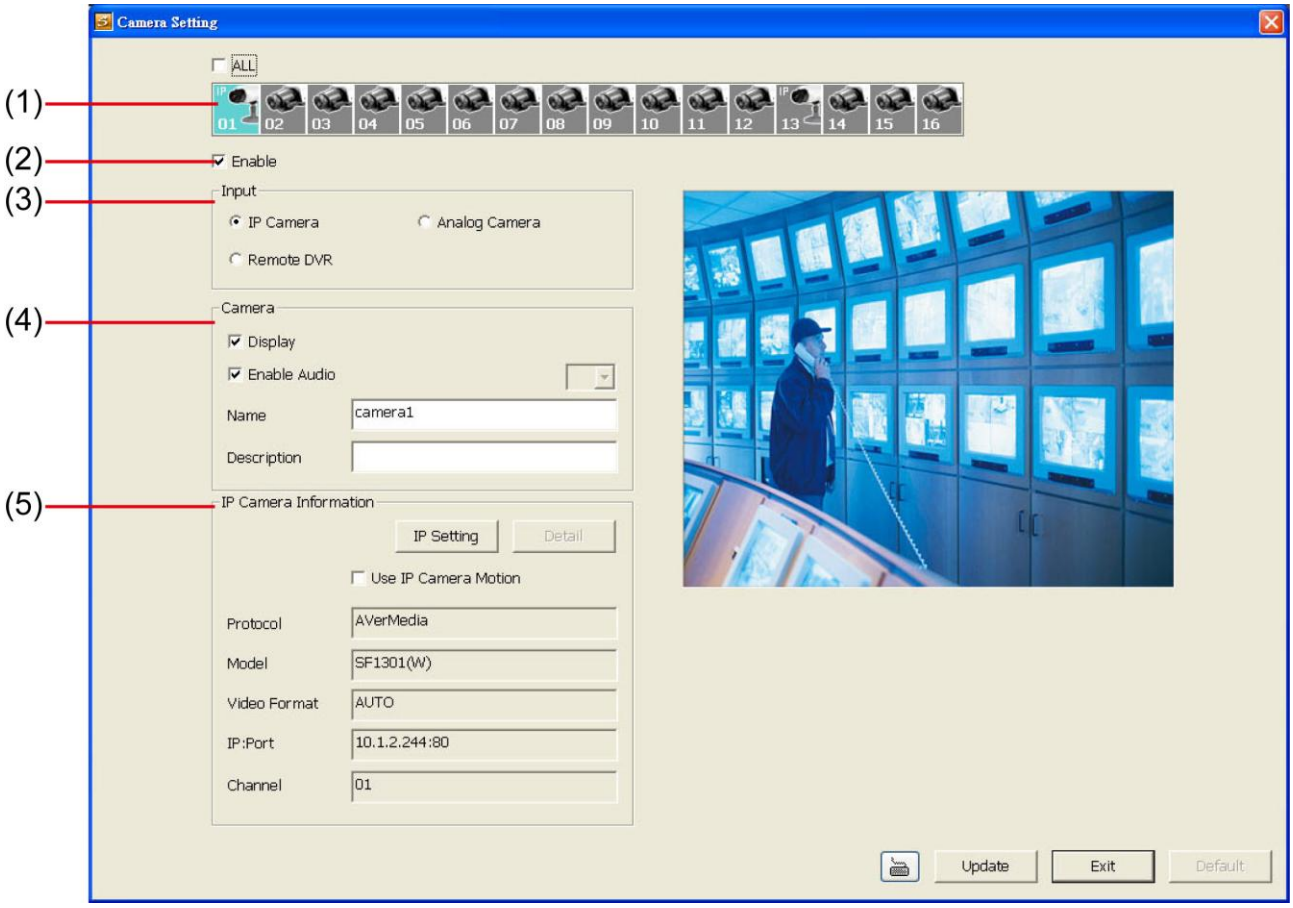
Enable the conditions in Login section you want the system to automatically carry out.

- **Auto record when login**
  Automatically start video recording when the DVR is executed.
- **Auto start Network when login**
  Automatically connect to network when the DVR is executed.

6.1.3.2 Camera Setting

Select the camera from remote DVR servers to modify settings. In the Camera Setting windows, click **Update** to save and apply the new settings, click **Exit** to exit without saving.

IP Camera Setting



(1) Camera Icons

Select the camera number you want to adjust the video setting. To select all the cameras, enable the **ALL** check box. To select more than one camera, Right click on the camera icon. To select one camera only, Left click on the camera icon. The camera icon turns red when it is selected.

(2) Enable

Set to enable/disable the selected camera. When there is no video source on the camera, we suggest disabling it so that the system won't detect it as video loss error.

(3) Input

Select the type of camera as IP camera. For General camera setting, see Analog Camera Setting. To modify camera of remote DVR, see Remote DVR Camera Setting.

(4) Camera

- **Display:**
  Enable/disable to show the video. Even if the video of the selected camera is hidden you can still record the video and preview it in playback mode.
- **Enable Audio**
  Audio function doesn't support on IP camera.
- **Name**
  Change the camera name

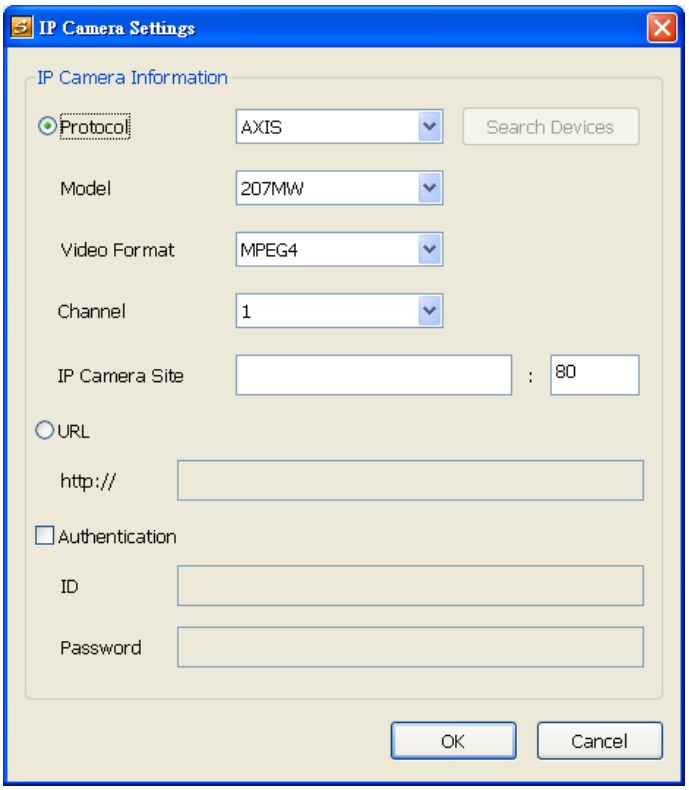
- **Description**

  Add a short comment

(5) IP Camera Information

To setup IP camera and display current IP camera information.

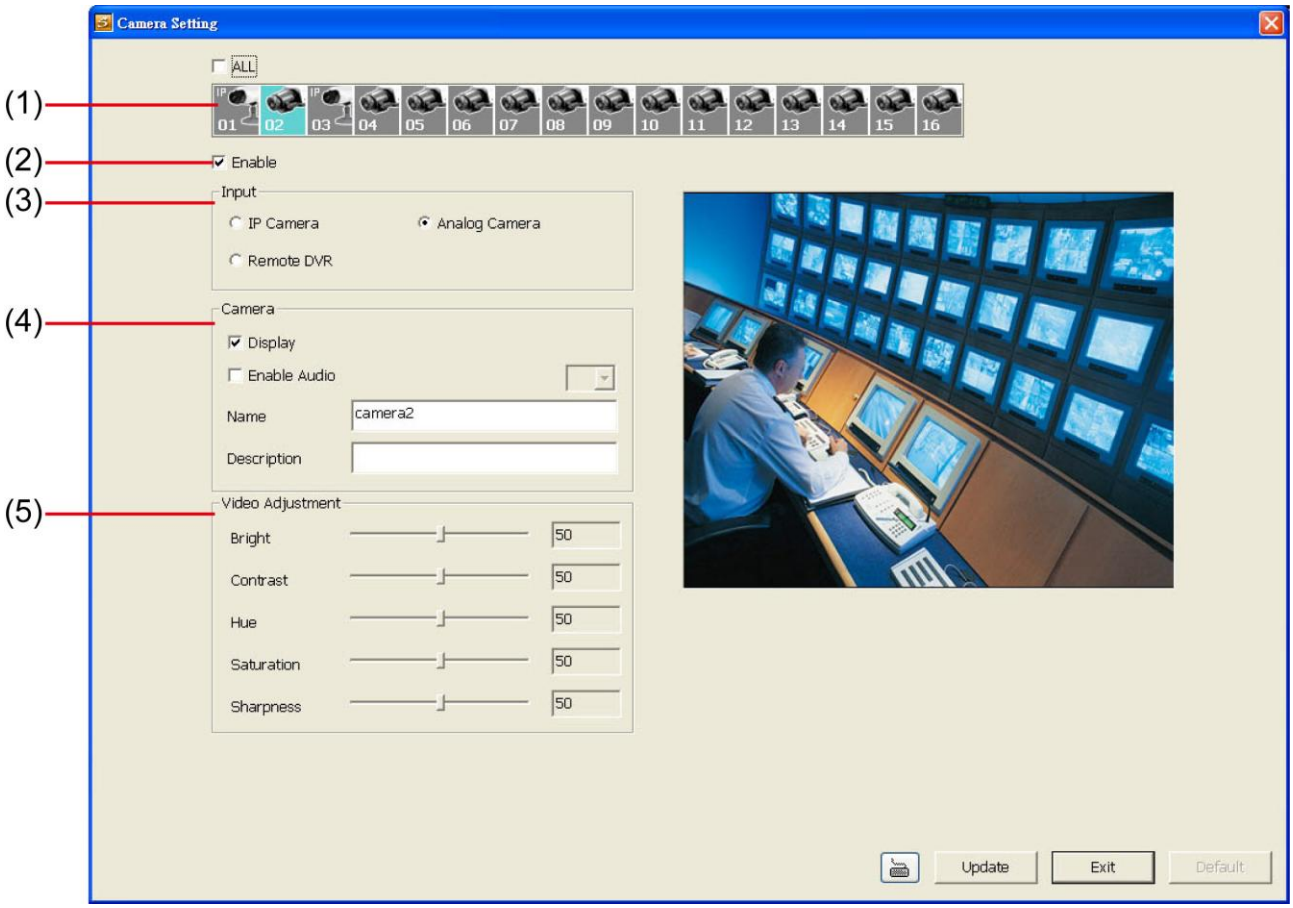
■ **IP Setting:** Click **IP setting** to add the IP camera.



1. Click the radio button of **Protocol** to start setup IP camera.
2. Select the **Protocol**, **Model**, **Video Format**, and **Channel** of the IP camera.
3. Enter IP address and connecting port in **IP Camera Site** column.
4. Also, user can enter URL of IP camera instead of IP address.
5. If the IP camera has authority request, please enable **Authentication** and enter **ID** and **Password**.
6. Click **OK** to connect with the IP camera.

Analog Camera Setting

Select the camera from remote DVR servers to modify settings. In the Camera Setting windows, click **Update** to save and apply the new settings, click **Exit** to exit without saving.



(1) Camera Icons

Select the camera number you want to view. To enable/disable all cameras, click **ALL** check box.

(2) Enable

Set to enable/disable the selected camera. When there is no video source on the camera, we suggest disabling it so that the system won't detect it as video loss error.

(3) Input

Select the camera type as **General Camera**. For IP camera setting, see IP Camera Setting. To modify camera of remote DVR, see Remote DVR Camera Setting.

(4) Camera

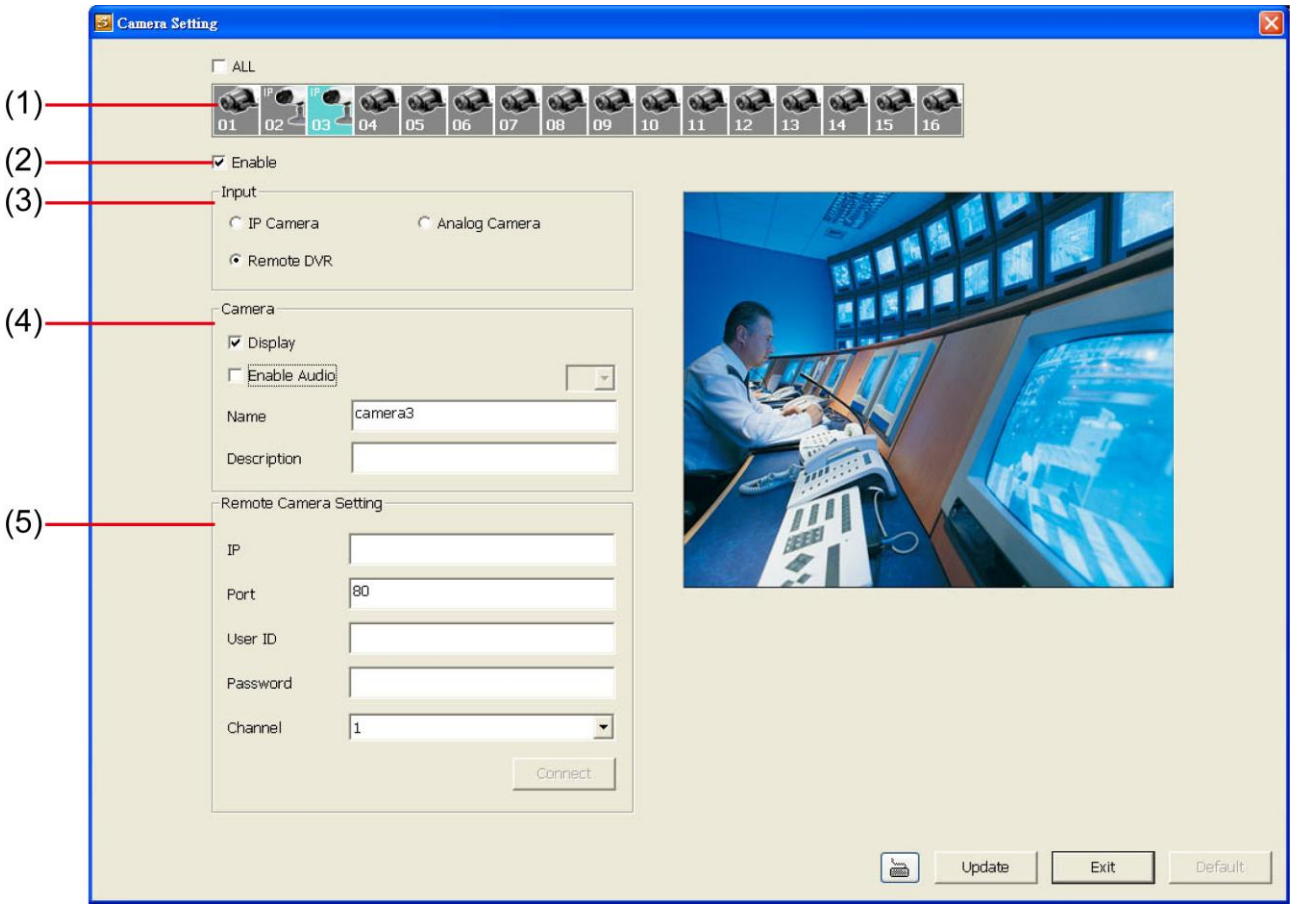
- **Display**
  Enable/disable to show the video. Even if the video of the selected camera is hidden you can still record the video and preview it in playback mode.
- **Enable Audio**
  Enable/disable audio of the camera.
- **Name**
  Change the camera name
- **Description**
  Add a short comment

(5) Video Adjustment

Adjust the Brightness, Contrast, Hue and Saturation of the camera.

Remote DVR Camera Setting

Select the camera to modify settings. In the Camera Setting windows, click **Update** to save and apply the new settings, click **Exit** to exit without saving.



(1) Camera Icons

Select the camera number you want to view. To enable/disable all cameras, click **ALL** check box.

(2) Enable

Set to enable/disable the selected camera. When there is no video source on the camera, we suggest disabling it so that the system won't detect it as video loss error.

(3) Input

Select the camera type as **Remote DVR**. For IP camera setting, see IP Camera Setting. To modify analog camera setting, see Analog Camera Setting.

(4) Camera

- **Display**
  Enable/disable to show the video. Even if the video of the selected camera is hidden you can still record the video and preview it in playback mode.
- **Enable Audio**
  Audio function doesn't support on camera channel of remote DVR.
- **Name**
  Change the camera name
- **Description**
  Add a short comment

(5) Remote Camera Setting

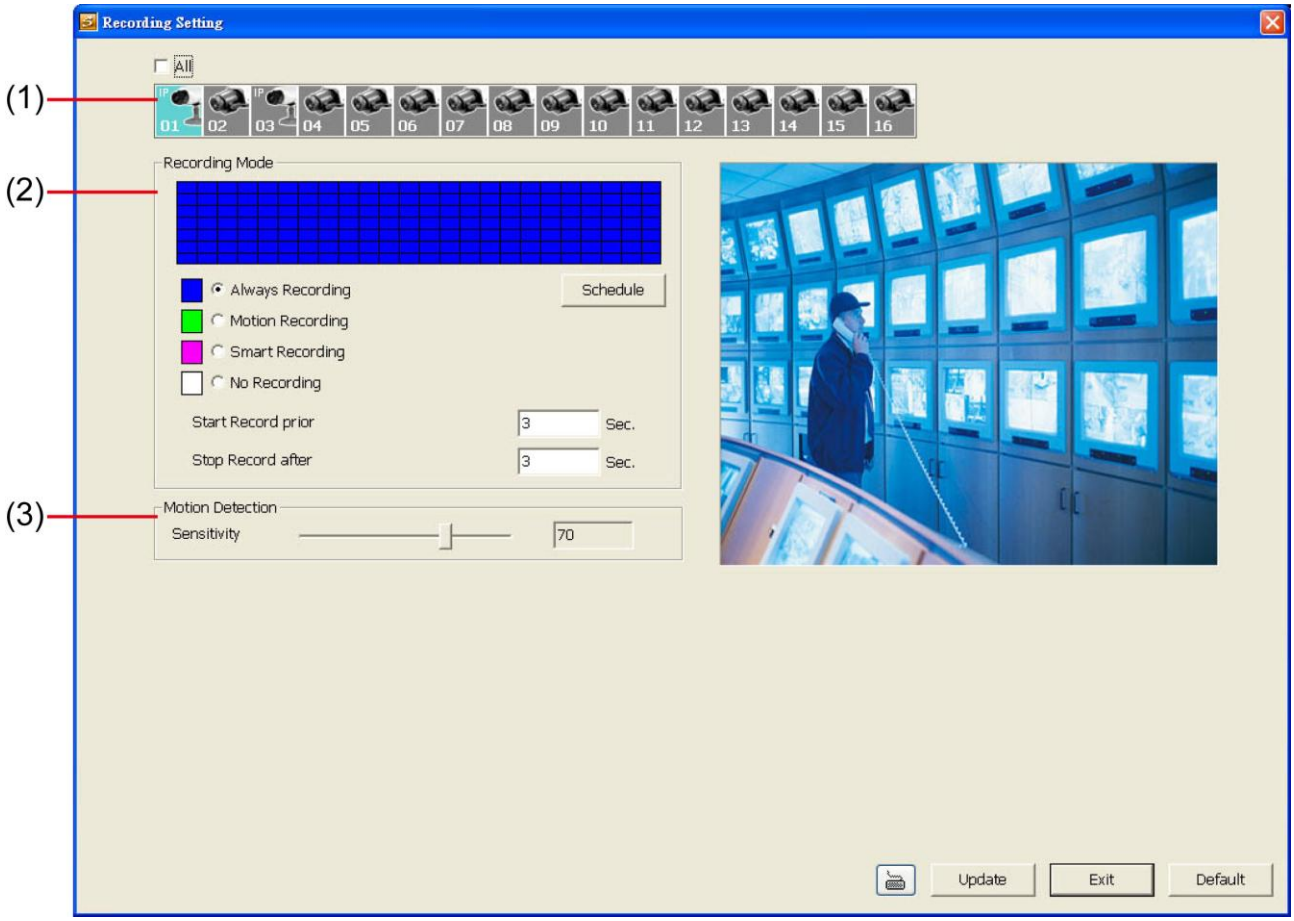
- **IP**
  Enter the IP address of the camera

- **Port**
  The port for connection
- **User ID**
  Enter the user id that for connecting authority
- **Password**
  Enter the password that is for connecting authority
- **Channel**
  Select the channel of connected camera

6.1.3.3 Record Setting

In the Recording setup windows, click **OK** to accept the new settings, click **Exit** to exit without saving, and click **Default** to revert back to original factory setting.

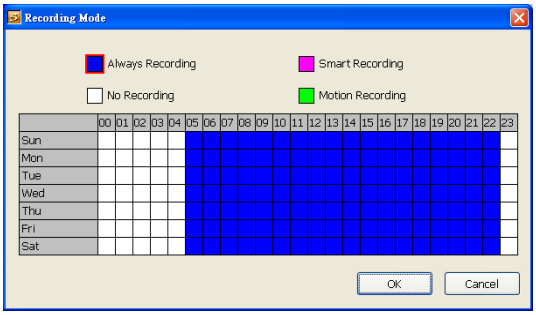
IP Camera



(1) Camera Icons

Select the camera number you want to set the recording setting. To select all the cameras, enable the **ALL** check box. To select more than one camera, **Right click** on the camera icon. To select one camera only, **Left click** on the camera icon. The camera icon turns red when it is selected.

(2) Recording Mode



The horizontal blocks from 00 to 23 represent the time in 24-hour clock and the vertical block 1 to 7 represent the day in the week block (Sunday to Saturday). To record in full 24 hours and 7 days a week, select the recording mode and click the ⊙ button. If you want to only record at a particular time or day, click **Schedule** button and select the **Recording Mode** , and then click on the time or day

blocks. When the system starts recording a red triangle mark would appear at the upper left corner of the screen.

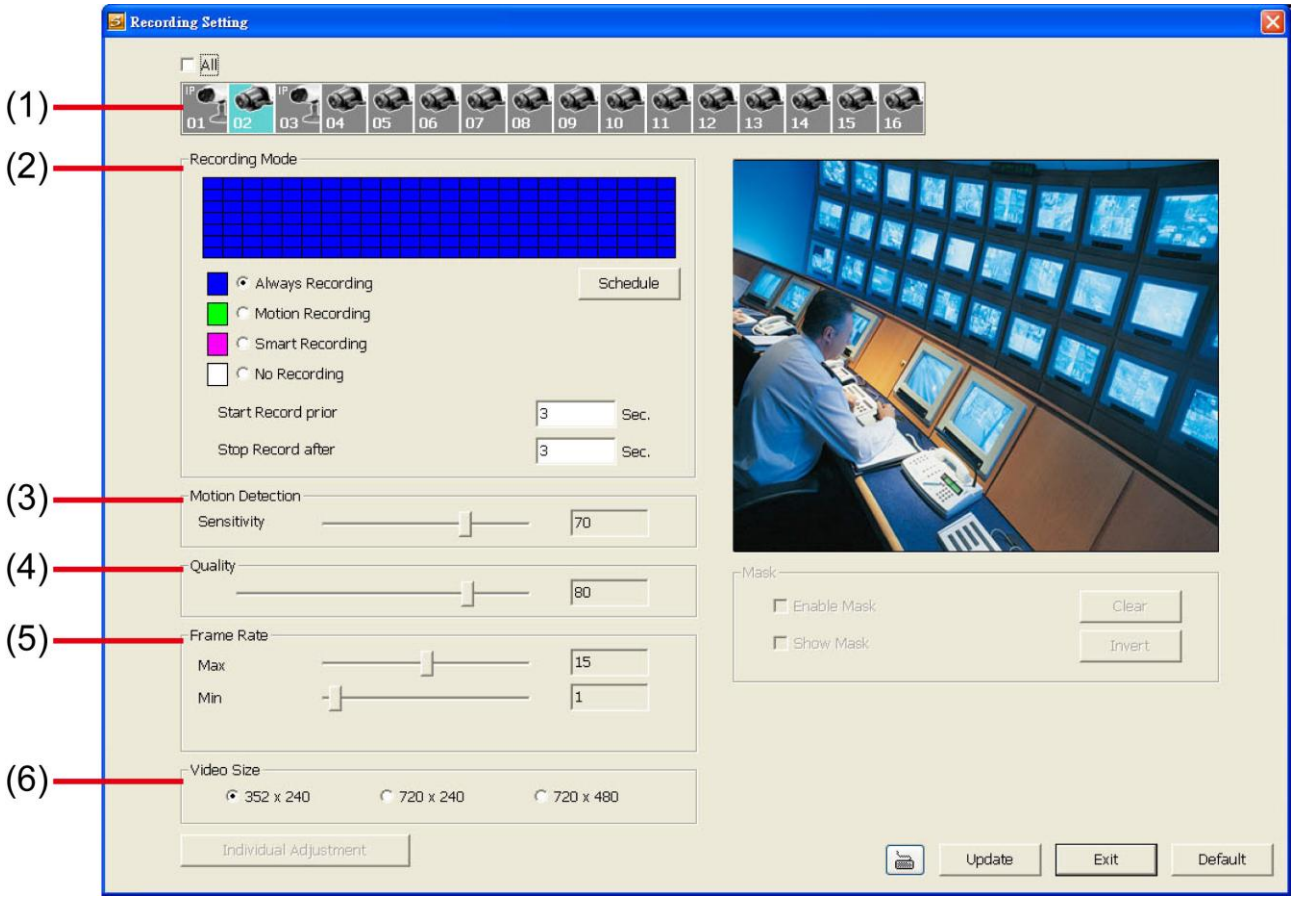
The recording modes are listed below:

- **Always Recording**
  Record the video from the selected camera and save it to the designated storage path
- **Motion Recording**
  Start recording the video from the selected camera only when the system detects movement. Once a motion is detected, the system automatically saves the previous frames and stop based on the **Start Record Prior** and **Stop Record After** settings.
- **Smart Recording**
  Automatically switch to recorded at the maximum frame rate setting once a motion is detected and if there is no motion, it records at the minimum frame rate setting.
- **No Recording**
  The system won't do any recording.

(3) Motion Detection

Adjust the sensitivity of the motion detection. The higher the value, the finer the sensitivity is detected. When it detects a motion, a green triangle mark would appear at the upper left corner of the screen.

Analog Camera

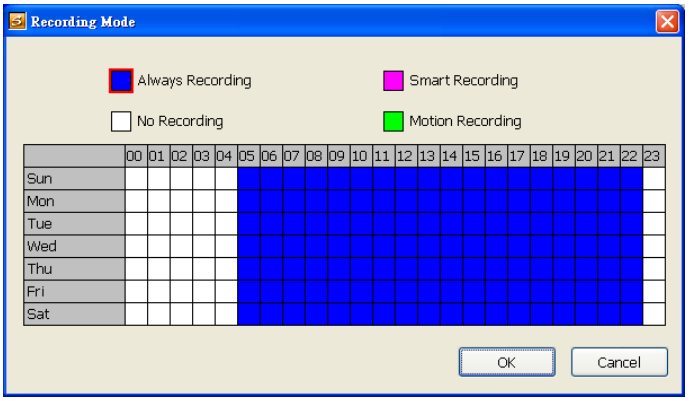


(1) Camera Icons

Select the camera number you want to set the recording setting. To select all the cameras, enable the **ALL** check box. To select more than one camera, **Right click** on the camera icon. To select one camera only, **Left click** on the camera icon. The camera icon turns purple when it is selected.

(2) Recording Mode

The horizontal blocks from 00 to 23 represent the time in 24-hour clock and the vertical block 1 to 7 represent the day in the week block (Sunday to Saturday). To record in full 24 hours and 7 days a week, select the recording mode and click the ⊙ button. If you want to only record at a particular time or day, click **Schedule** button and select the **Recording Mode** , and then click on the time or day blocks. When the system starts recording a red triangle mark would appear at the upper left corner of the screen.



The recording modes are listed below:

- **Always Recording**

  Record the video from the selected camera and save it to the designated storage path

- **Motion Recording**
  Start recording the video from the selected camera only when the system detects movement. Once a motion is detected, the system automatically saves the previous frames and stop based on the **Start Record Prior** and **Stop Record After** settings.
- **Smart Recording**
  Automatically switch to recorded at the maximum frame rate setting once a motion is detected and if there is no motion, it records at the minimum frame rate setting.
- **No Recording**
  The system won't do any recording.

(3) Motion Detection

Adjust the sensitivity of the motion detection. The higher the value, the finer the sensitivity is detected. When it detects a motion, a green triangle mark would appear at the upper left corner of the screen.

(4) Quality

Adjust the video quality. The higher the value, the lower the compression level and uses more hard disk space.

(5) Frame Rate

Set the maximum and minimum number of frames to be recorded during motion and motionless state. The frame rate ranges from 01 to 30 for NTSC and 01 to 25 for PAL. The higher the frame rate, it uses more hard disk space.

Always recoding frame rate is depending on max frame rate value.

(6) Video Size

Select the size of the video and click the ⊙ button. The higher the size, the larger the file it create.

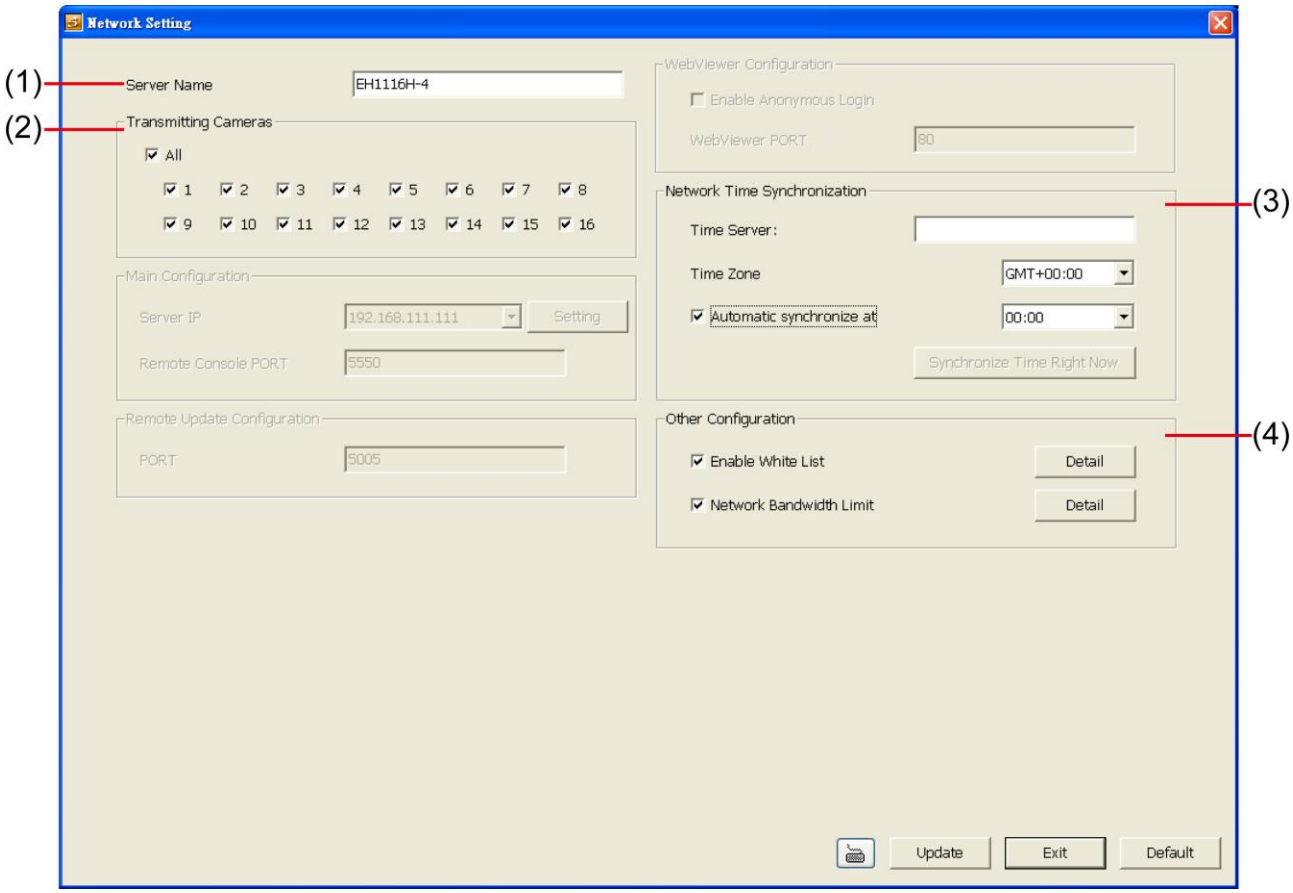
(7) Individual Adjustment

Each camera can adjust video size and frame rate individually. Click **Default** will back to the factory default value. The frame rate usage is shown in **Used** and **Unused** columns by CIF mode.

Adjusting video size and frame rate by channel, only available on the analog camera.

6.1.3.4 Network Setting

In the Network Setting dialog box, click **Update** to accept the new settings, click **Exit** to exit without saving, and click **Default** to revert back to original factory setting. For the network service ports that use by DVR server, please see Appendix A.



(1) Server Name

Assign a name for the DVR unit. Alphabet letters and numbers only.

(2) Transmitting Cameras

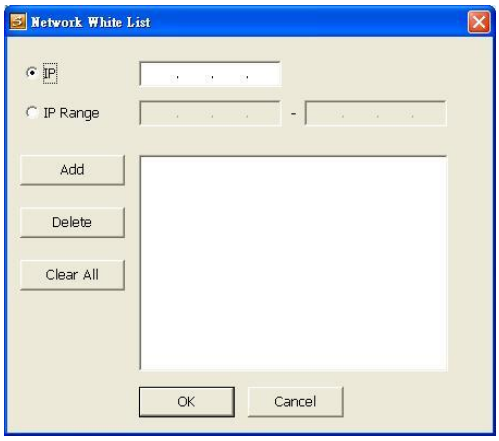
Select and click on the camera number in the Transmitting Camera section you want to make it accessible via internet using PCViewer, Remote Console, PDA Viewer and JavaViewer (still image). To select all the cameras, enable the **ALL** check box.

(3) Network Time Synchronization

Adjust the DVR system time same as network time server. Fill in the **Time Server** IP address or domain name. Select the **Time Zone** that DVR is located. And then, mark the **Automatic Synchronize** time to set automatic synchronize time on a daily basis.

(4) Other Configuration

- **Enable White List:** An access permit list for the remote accessing of DVR server. Enter the IP address and click **Add**. Or, enter a range of IP address and click **Add**. To delete the IP from the list, select the IP and click **Delete** button. To reset the input, click **Clear** button.

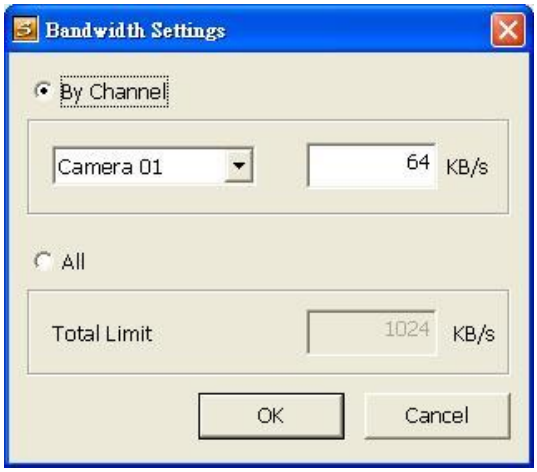


Without any IP/IP range is assigned in White List table, none of IP address/IP range is allowed to access DVR when White List function is enabled.

- **Network Bandwidth Limit**

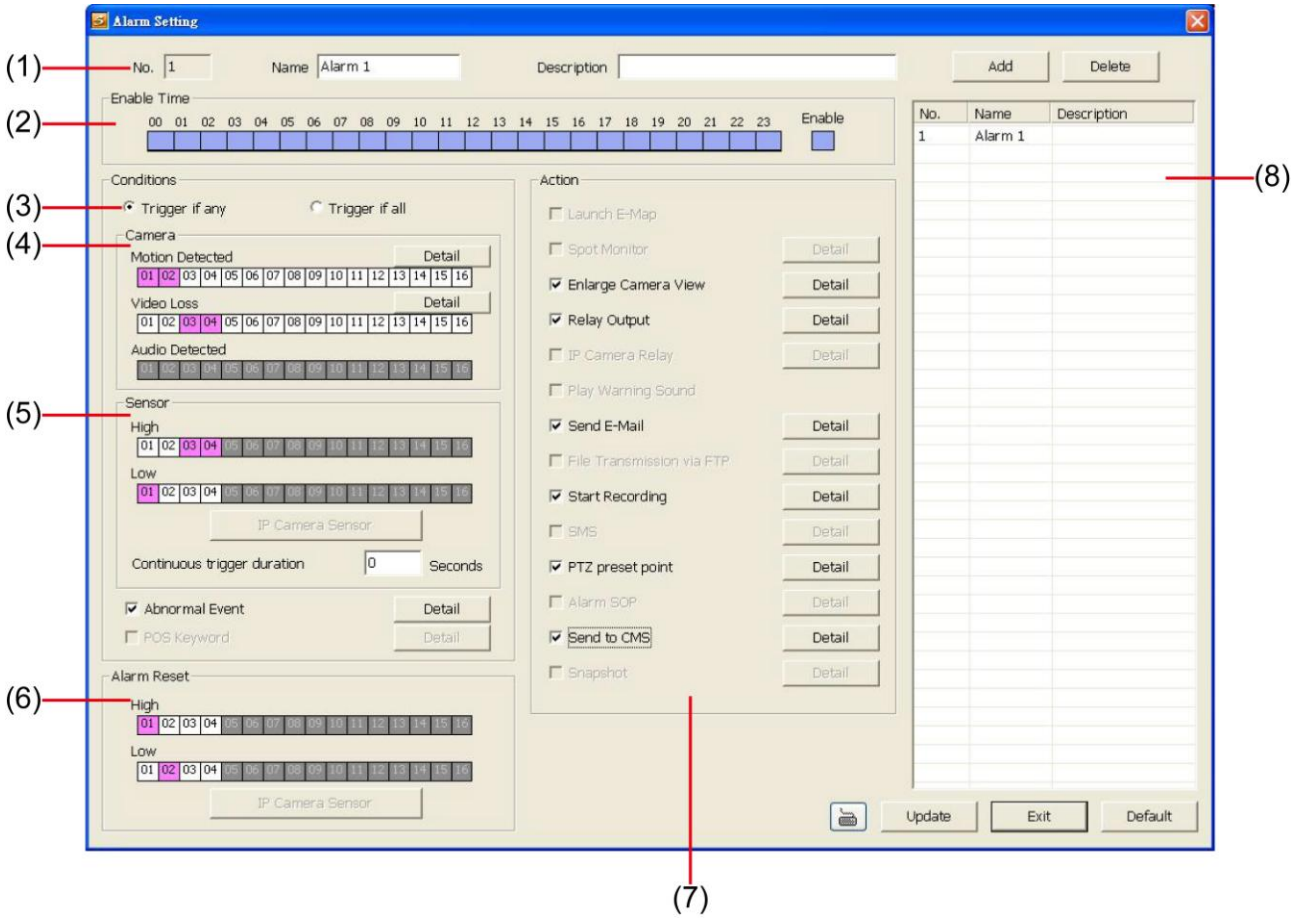
  By Channel: Set the network bandwidth by each channel.

  All: Set the total network bandwidth consumption limit.

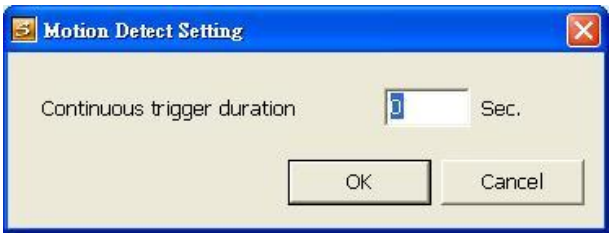


6.1.3.5 Alarm Setting

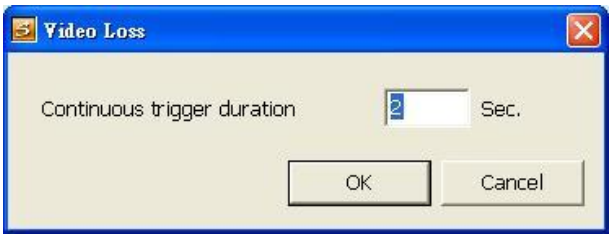
In the Alarm Setting dialog box, click **Add** to insert and set new alarm setting, click **Delete** to remove the selected alarm setting, click **Update** to save the setting, **Exit** to exit without saving, and **Default** to revert back to original factory setting.



1. Click **Add** to insert and set a new alarm setting. Click the items in the **(8) Alarm Setting List** if you want to modify the alarm setting.
2. In **(1) No./Name/Description** enter alarm name and description. Alarm **No.** will be created by DVR system.
3. In **(2) Enable Time**, the number from 00 to 23 represent the time in 24-hour clock. Select the time and click the block you want to activate or deactivate the alarm function. When it is deactivated the color of the block turns white.
4. In **(3) Conditions**, you can set "**Trigger if any**" to activate if it falls to one of the conditions or "**Trigger if all**" to activate if it falls to all conditions.
5. In **(4) Camera** section, select and click on the camera number (01 to 08 or 01 to 04) in **Motion Detected** and **Video Loss** to set the condition for the system to alarm.
   - **Motion Detected:** select and click on the camera number (01 to 16) to set the condition for the system to alarm. Click **Detail** button to setup the system to send out the alarm when motion is detected and last the time that user has entered in **Continuous trigger duration**.



- **Video Loss:** click the camera number (01 to 16) to set the alarm condition when video is lost. Click **Detail** button to setup the system to send out the alarm when video is lost and status last the time that user has entered in **Continuous trigger duration**.



6. In **(5) Sensor**, select and click on the sensor number to set the condition for the system to alarm. If the sensor normal status is high, set the sensor condition to low.
   - **Continue trigger duration:** Set a time period that when sensor has been trigger and stay in the same status for that period, then the alarm will be sent out.
   - Enable/disable the **Abnormal Event** check box, to set the condition of the event for system to alarm.

   - **System Reboot:** when the DVR system reboot without abnormal condition, the system will send out the alarm message.
   - **Abnormal Reboot:** when the DVR system reboot in irregular condition, the system will send out the alarm message.
   - **Recording is switched off:** when the recording has been stopped, the system will send out the alarm message.
   - **Network is switched off:** when the network connection of DVR system is lost, the system will send out the alarm message.
   - **Hard Disk failed:** when the hard disk doesn't work normally, the system will send out the alarm message.
7. In **(6) Alarm Reset**, click the camera number to set the reset condition of alarm. Once alarm is reset, all alarm action will stop at the moment. If the sensor normal status is high, set the alarm reset condition to low.
8. In **(7) Action**, you may now set the alarm action for the system to perform when the alarm condition is activated.

- **Enlarge Camera View**

  Switch to only display video in Preview mode from where the alarm is activated.

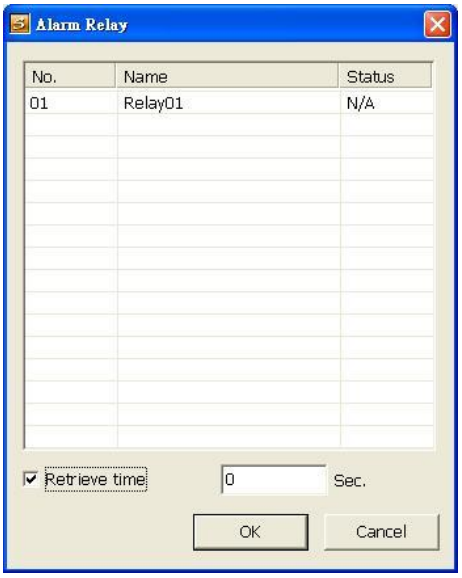
  a. Select the camera from drop down list to specify which camera video to be enlarged on screen when the alarm is triggered.

  b. **Retrieve time:** set the waiting duration before system switching back to original Preview mode. If the retrieve time is un-mark, the alarm video will keep enlarging until user switch back to Preview mode manually. The retrieve time range is 0~ 600 seconds.

- **Relay Output**

  Set to enable/disable the relay operation when the alarm is activated and to extend additional time in second before it stops the relay operation.

  1. Beside the Relay Output check box, click **Detail**.
  2. In the Alarm Relay dialog box, select from the available relay list and in the ON column, set to enable/disable the relay operation when the alarm is activated.
  3. In the Retrieve time check box, you may enable/disable to extend the relay operation time and set the duration in second.
  4. Click **OK** to exit and accept the setting and **Cancel** to exit without saving the setting.



- **Send E-mail**

  Send an electronic text message. Beside the Send Email check box, click **Detail**.

  In the E-mail Setting dialog box, click **OK** to exit and save the setting and **Cancel** to exit without saving the setting.

  ➢ **Mail Server**

  Enter the **SMTP Server** and **port**. If your e-mail system requires user identification, enable **Authentication** check box and enter **ID** and **Password**.

  ➢ **Mail**

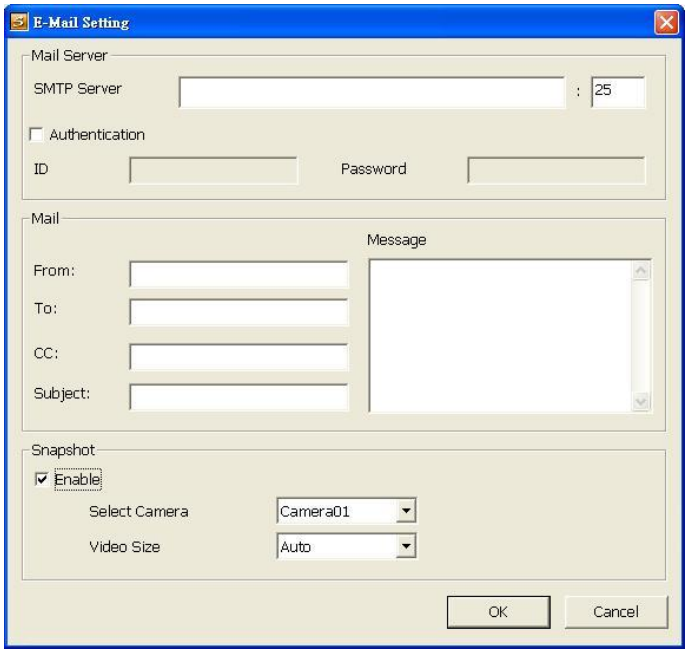
  Fill the mailing information.

  ✓ **From:** Enter the sender e-mail address.

  ✓ **To and CC:** Enter the recipient email address and separate it with comma or a semicolon (;).

  ✓ **Subject:** Enter the message title.

  ✓ **Message:** Type the message.



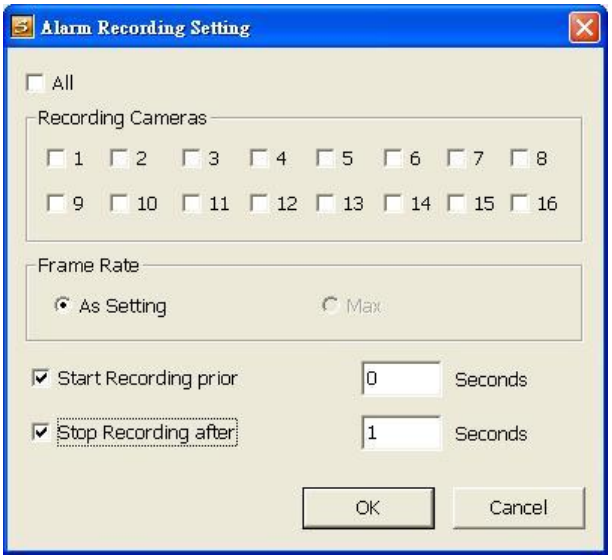
➢ **(3) Snapshot**

When send out the email, the DVR system will snapshot image of the selected camera channel.

- ✓ **Select Camera:** Select the channel that will be snapshot when alarm email is sending out.
- ✓ **Video Size:** Select the size of video that will be taken when snapshot. Auto means default size that chosen by DVR system.

- **Start Recording**

Record the video from the selected camera.

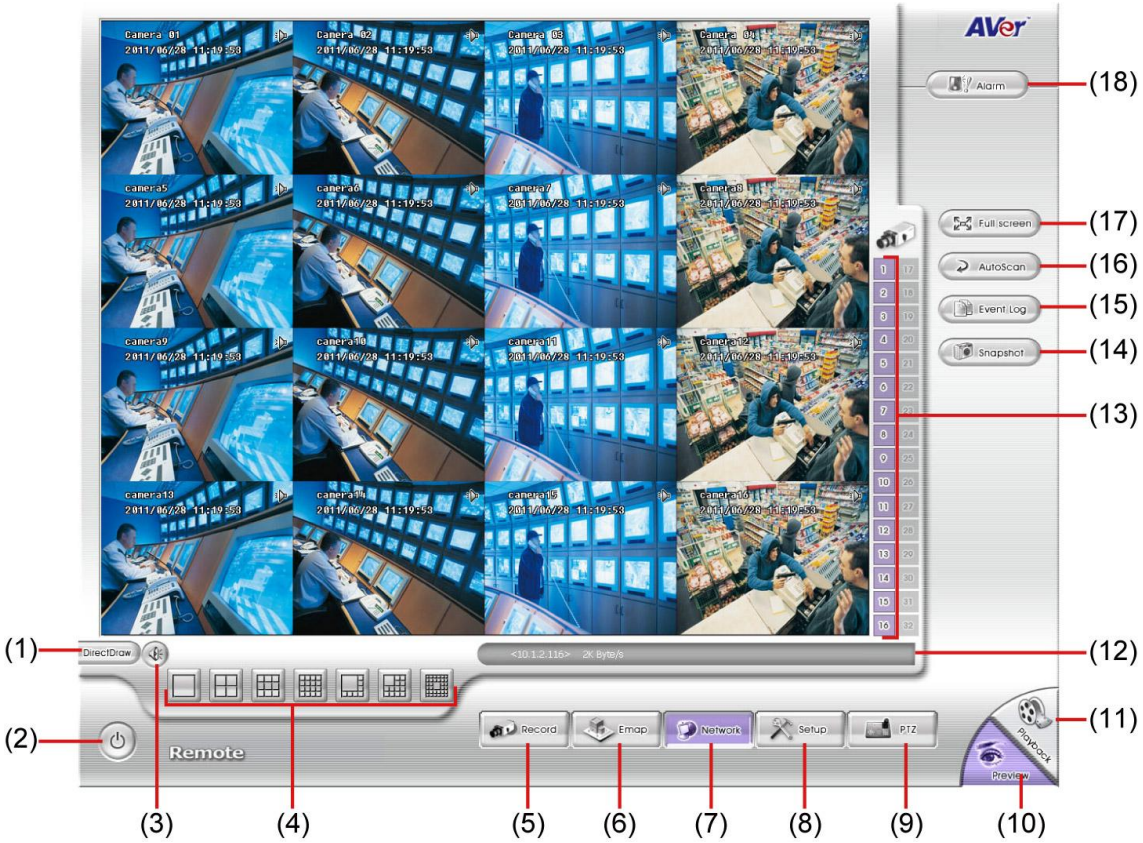


1. Beside the Start Recording check box, click **Detail**.
2. In the Alarm Recording Setting dialog box, select the camera to enable/disable video recording. Enable **All** to select all cameras.
3. In the Frame Rate selection, select **As Setting** to record the number of frames based on the Recording Setting.
4. In the **Start Record prior** text box, mark and set the number in second for the program to begin recording after the alarm has been trigger. The time range is 1~10 seconds.
5. In the **Stop Record after** text box, mark and set the number in second for the program to continue recording after the alarm has ended. The time range is 1~999 seconds. If user doesn't mark and set the time, the alarm recording will continue recording until alarm is reset.
6. Click **OK** to accept the new settings and **Cancel** to exit without saving.

- **Send to CMS (Central Management System)**

Enable/disable the selected camera to send video to CMS when the alarm is activated. Beside the Send to CMS check box, click **Detail**. In the CMS Setting, select the camera to enable/disable sending the video to CMS. Enable **All** to select all cameras. Then, click **OK** to accept the new settings and **Cancel** to exit without saving.

6.2 Familiarizing the Buttons in Remote Console

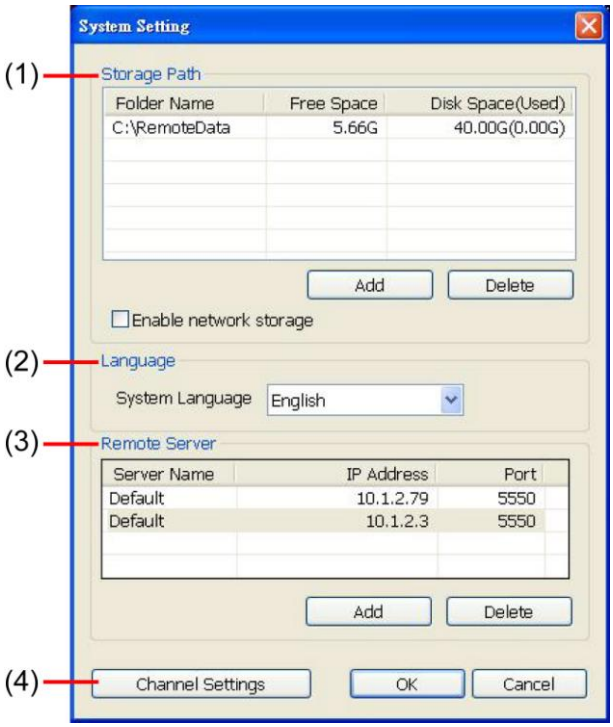


Name	Function
(1) DirectDraw	Enhance the video quality.
Direct Draw function supports for certain VGA card. For more information, please contact your VGA card vendor.	
(2) Exit	Close the Remote Console.
(3) Audio button	Enable/disable the sound.
(4) Split Screen Mode	Select from four(4) different split screen type to playback the recorded video file of all the camera, or one camera over the other or alongside on a single screen. If there are only 8 cameras, you won't be able to switch to 13 and 16 split screen mode.
(5) Record	Start/stop video recording.
(6) Emap	Call out Emap of remote DVR to view.
(7) Network	Enable/disable remote system access. This feature allows you to access DVR server from a remote location via internet connection.
(8) Setup	Configure the Remote Console setting. (see also Chapter 6.2.1)
(9) PTZ	To select PTZ camera.
(10) Preview	Switch to Preview/Playback mode. This allows you to view live camera display.
(11) Playback	Switch to Playback mode. This allows you to view the recorded video file. (see also Chapter 6.4)
(12) Status Bar	Display the current date, time and hard disk free space.
(13) Camera ID	Show the number of cameras that are being viewed. When you are in single screen mode, click the camera ID number to switch and view other camera.
(14) Snapshot	Capture and save the screen shot either in *.jpg or *.bmp format.

Name	Function
(15) Event Log	Display the Event logs, Operation logs, System logs, and Network logs.
(16) Auto Scan	Enable/disable channel switch cycle.
(17) Full screen	Use the entire area of the screen to only display the video. To return, Right-click the mouse or press **ESC** on the keyboard.
(18) Alarm	Alert and display warning info.

6.2.1 To Setup Remote Console Setting

Click **Setup** button to call out the **System Setting** windows. Click **OK** to exit and save the setting and **Cancel** to exit without saving the setting.



(1) Storage Path

Set the directory on where to save the data. When there is not enough free space to record one hour data, the system automatically replaces the oldest data. In case you have more than one storage path, the system automatically saves the data to the next storage path. By default the data is stored in C:\RemoteData, to insert another storage path, click **Add**. To remove the selected path, click **Delete**.

- **Enable network storage:** Select the Enable network storage check box to send the recorded video in network-attached storage.

To add network storage, the Internet storage drive/folder must be mapped as Network Driver in DVR server.

(2) Language

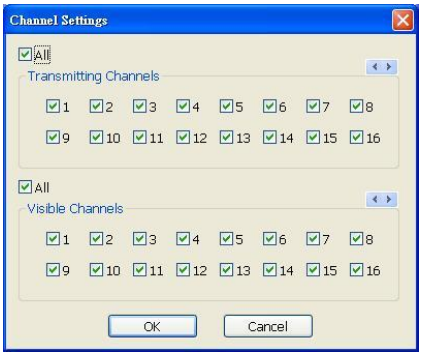
Customize the system to display the tool tips and dialogs based on the selected language. By default the language is in English.

(3) Remote Server

Enter the DVR Server IP and Server Port number.

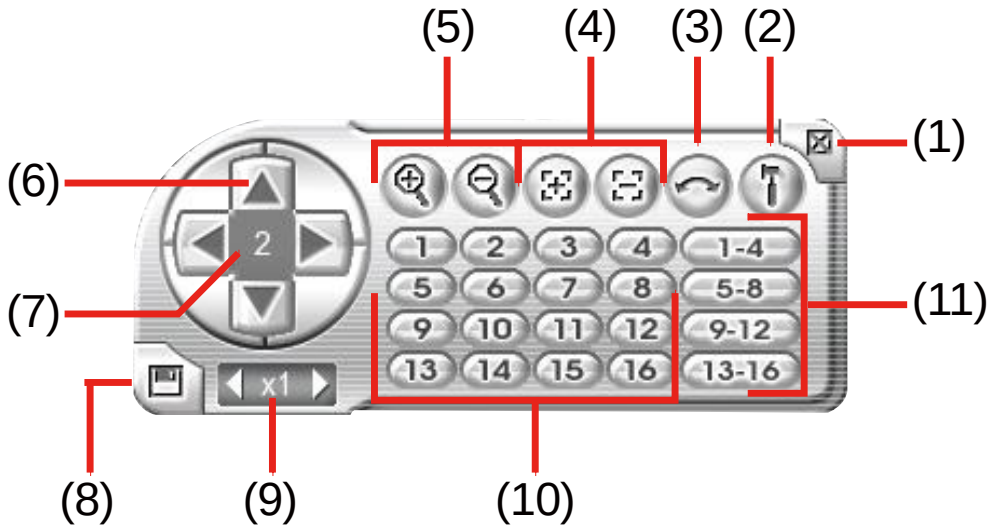
(4) Channel Settings

The numbers from 1 to 16 represent the camera ID. In Transmitting Channels section, enable the camera number to receive the camera signal from the server. In Visible Channels section, enable the camera



number to view the camera signal on Remote Console screen. To select all the cameras, enable the **ALL** check box.

6.2.2 Familiarizing the Buttons in PTZ Camera Controller



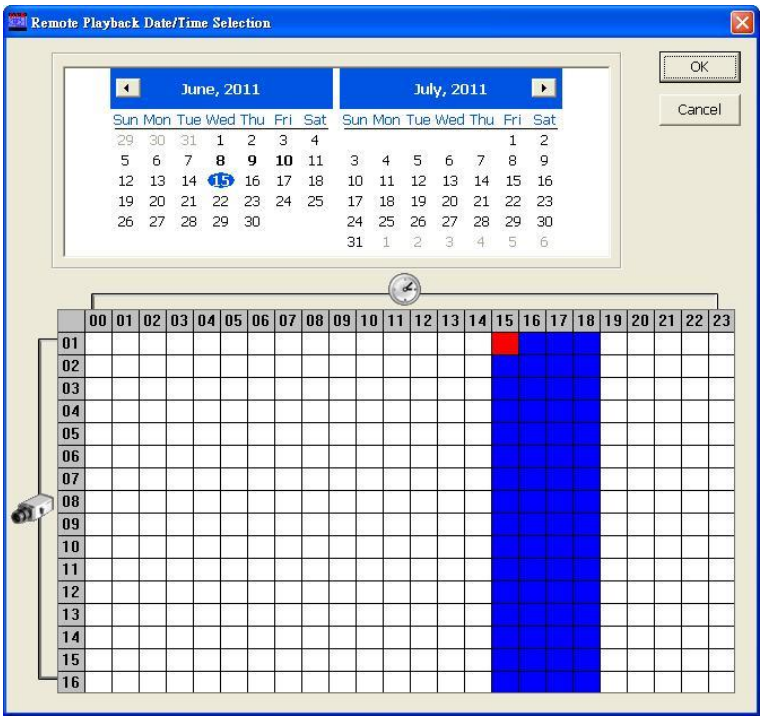
Name	Function
(1) Close	Exit PTZ camera controller.
(2) Setup	Select the PTZ camera to operate.
(3) AutoPan	Operate the PTZ cameras automatically based on the selected camera group preset position number.
(4) Focus +/-	Adjust the focus manually to produce clear image.
(5) Zoom +/-	Zoom in and out the image.
(6) Direction buttons	Adjust and position the focal point of the PTZ camera. The direction buttons only support up, down, right, and left direction.
(7) Camera ID pane	Display the PTZ camera number that is being operated.
(8) Camera lens speed controller	Adjust the moving speed of the PTZ camera lens.
(9) Camera preset position number	Move the PTZ camera to the preset point.
(10) Group AutoPan	Select to automatically operate PTZ camera in group.

6.3 Using the Remote Playback

To use this feature, first you need to select the source of the file. In the Select Playback Mode dialog box, choose **Local Playback** to open the file that is recorded in the Remote Console, and **Remote Playback** to open the file that is recorded in the DVR server. When you choose Remote Playback, select **RealTime Playback** if your internet bandwidth is fast and big enough, otherwise choose **Download and Playback**.

Click **OK** to proceed and **Cancel** to void this operation.

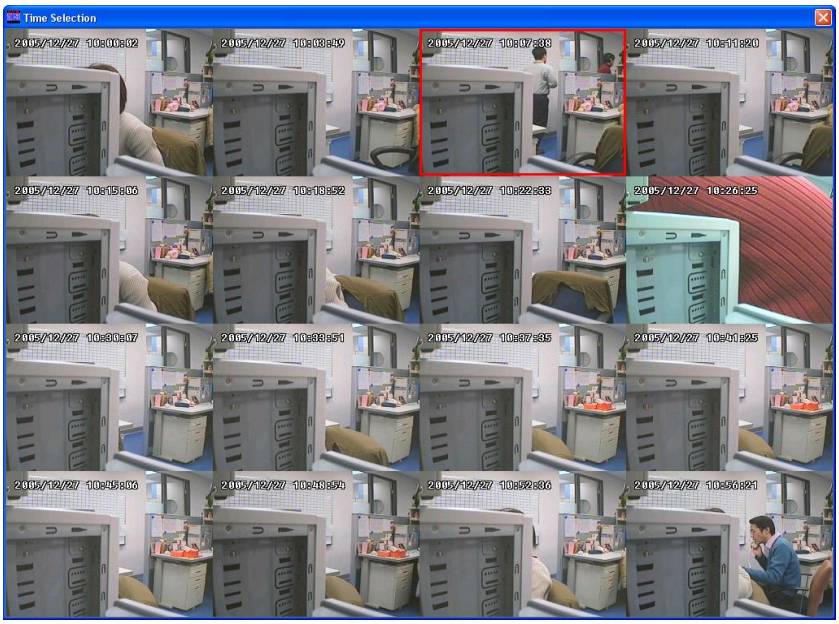
In the Video Playback Date/Time Selection, the number from 00 to 23 represent the time in 24-hour clock. The numbers from 01 to 8 represent the camera number.



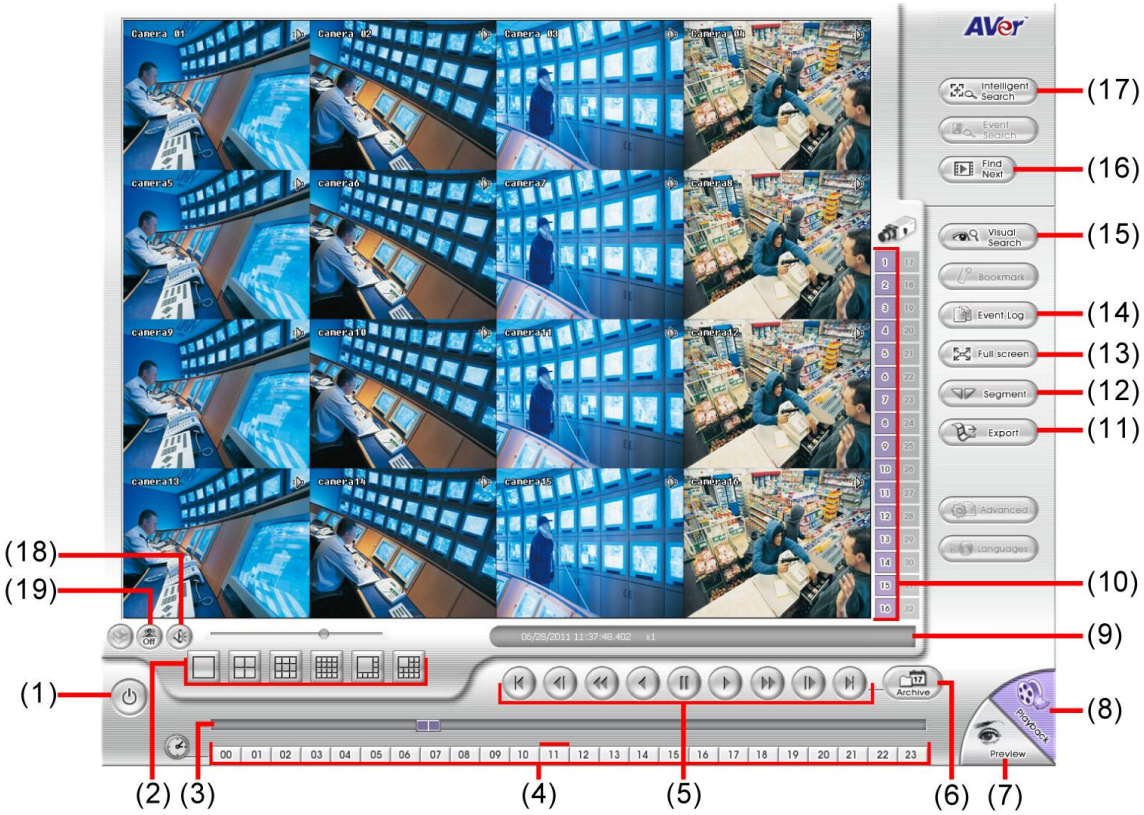
To Make a Selection:

1. Select the date in the calendar. Use ◂ and ▸ buttons to shift the calendar to the left or right.
2. In the table below, click on the blue block to select and open the recorded file. The blue block turns red when it is selected. The block that appears in white doesn't have data. You can only select one block when you choose Download and Playback.
3. Click **OK** to proceed and **Cancel** to void this operation.
4. If you select Download Playback and after making the selection, the system divides the selected hour into

16 video thumbnails. In the Time Selection screen, click on the video thumbnail you want to download (see also Chapter 6.4.3).



6.3.1 Familiarizing the Buttons in Local Playback

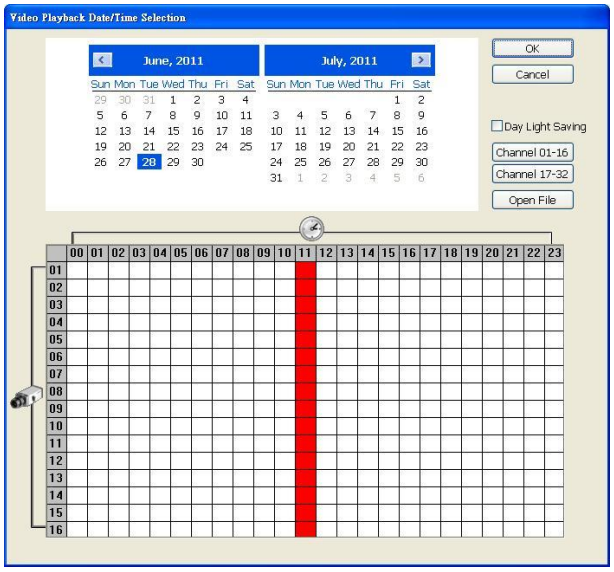


Name	Function
(1) Exit	To close the application
(2) Split Screen Mode	Select from four(4) different split screen type to playback the recorded video file of all the camera, or one camera over the other or alongside on a single screen.

- If there are only 8 cameras enabled, you won't be able to switch to 13 and 16 split screen mode.
- To zoom in an area on the screen, Right click and Drag a square on the area you want to enlarge. To back to normal view, right click the channel screen again.

Name	Function
(3) Progress bar	Show the progress of the file being played. You may move the bar to seek at any location of the track.
(4) Hour Buttons	Select and click to playback the recorded video file on the specific time frame.

The Hour buttons represent the time in 24-hour clock. The blue bar on top of the hour button indicates that there is a recorded video file on that period of time. If there is no recorded data within the hour, there will be no color bar on top of the hour button. While the red bar indicates that you are currently viewing the recorded video file.

(5) Playback Control Buttons	**Begin:** Move at the beginning of the recorded video file. **Previous:** Go back to the previous frame. **Slower:** Play the recorded video file at the speed of 1/2x, 1/4x, 1/8x, 1/16x, or 1/32x. **Rewind:** Wind back the video file. **Pause:** Briefly stop playing the recorded video file. **Play:** Play the recorded video file. **Faster:** Play the recorded video file at the speed of 2x, 4x, 8x, 16x or 32x. **Next:** Go to the next frame. **End:** Go to the end of the video file.
(6) Archive	Select the date on the calendar and the time from 00 to 23 to where to start playing the recorded video file. - **Day Light Saving:** Mark it to only show the recorded data during the day light saving period. - **Channel 01~16/Channel 17~32:** Click it to switch between channel group 1~16 and 17 ~32 of recorded data calendar. - **Open File:** To open the recorded file from other direction/storage path. 

The numbers from 00 to 23 represent the time in 24-hour clock. The numbers from 01 to 16 represent the camera ID. While the red colored column indicates on where to start playing the recorded video file. If there is no any video data, it will be no color bar on top of the date button.

(7) Preview	Switch to Preview mode.
(8) Playback	Switch to Playback mode. This allows you to view the recorded video file.
(9) Status bar	Display the record date, time, HDD capacity in preview mode and play speed in playback mode.
(10) Camera ID	Show the number of cameras that are being viewed. When you are in single screen mode, click the camera ID number to switch and view other camera.
(11) Export	Export includes Snapshot, Print, and Output Video Clip function. ■ **Snapshot:** Capture and save the screen shot either in *.jpg format. ■ **Print:** Print the screen shot. ■ **Output Video Clip:** Save the segmented file in *.dvr format (see also Chapter 6.3.1.1).
(12) Segment	Keep a portion of the recorded video you want (see also Chapter 6.3.1.1).

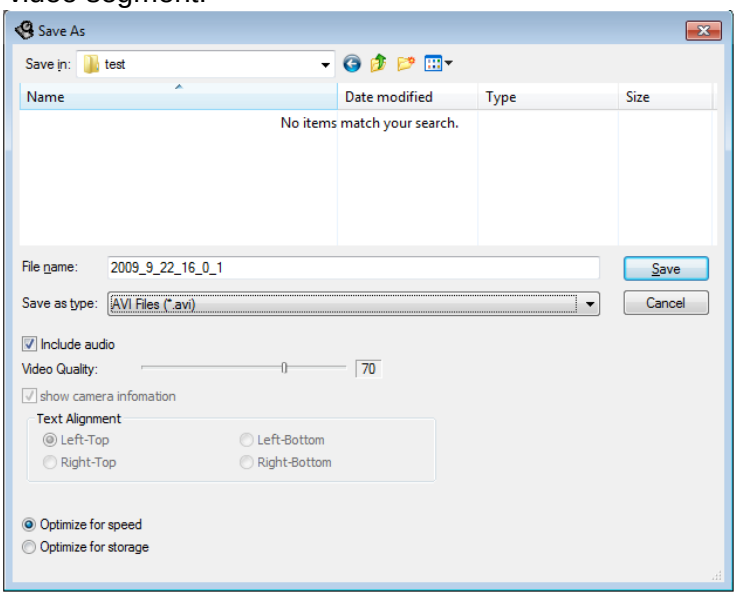
Name	Function
(13) Full screen	View in Playback-compact mode. To return, press the right button of the mouse or ESC on the keyboard.
(14) Event Log	Show the record of activities that take place in the system.
(15) Visual Search	Search from a specific camera by Date, Hour, Minute, 10 Seconds and Second (also see Chapter 4.3.5).
(16) Find Next	Search for the next event. You can use this when you are using Event Search function.
(17) Intelligent Search	Search the changes in the motion detector frame (See also Chapter 4.3.7).
(18) Audio	Enable/disable volume.
(19) De-interlace	To enhance the video quality. Set the de-interlace mode to #1, if you are capturing motionless picture and #2, if it captures lots of movement.

6.3.1.1 To Cut and Save the Wanted Portion of the Recorded Video

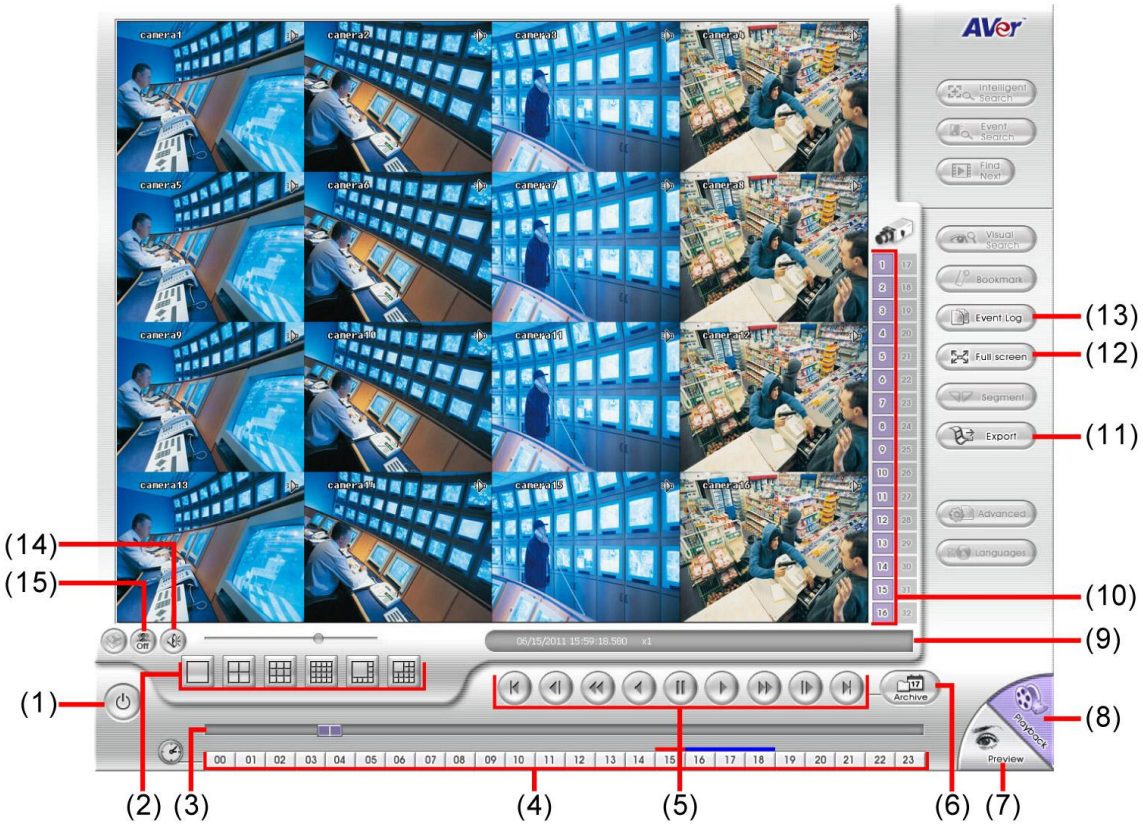
1. Use the Playback Control buttons or drag the bar on the playback progress bar and pause on where you want to start the cut. Then, click Segment to set the begin mark.

2. Use the Playback Control buttons or drag the bar on the playback progress bar and pause on where you want to end the cut. Then, click Segment to set the end mark. To cancel segmentation or set the segment marks from the start, click Segment button again.

3. Click **Export** > **Output Video Clip** button to save the wanted clip.
4. In the Save As dialog box, locate on where you want to save the file or choose to **Burn** the video segment to VCD/DVD ROM (only for .*mpeg file format).
5. Select the file type and select the camera information display position when playback. The camera information will be the information of server name that user has defined in Network Setting.
6. If the select the file type is *.avi, user can mark **included audio** to include audio in output video segment.
7. To adjust **Video Quality** if needed.
8. And, select the **Optimize for speed** for faster file opened. For saving storage, select **Optimize for storage** (*.mpg and *.avi file format only).
9. Click **Save** to save the video segment.



6.3.2 Familiarizing the Buttons in RealTime Playback



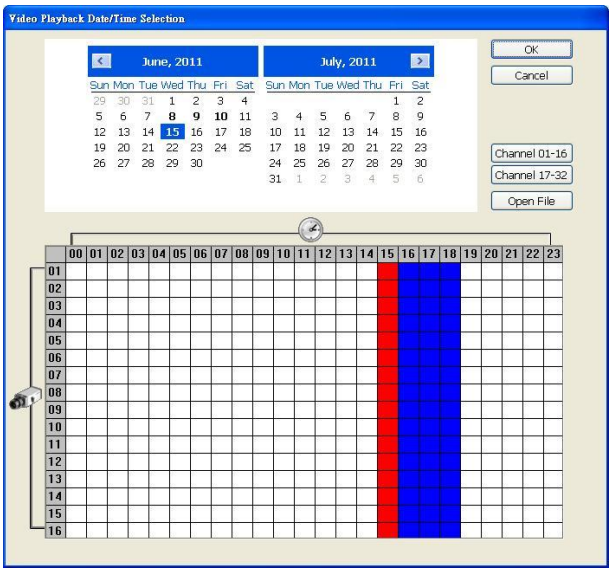
Name	Function
(1) Exit	To close the application
(2) Split Screen Mode	Select from 6 different split screen type to playback the recorded video file of the entire camera, or one camera.

- If there are only 8 cameras enabled, you won't be able to switch to 13 and 16 split screen mode.
- To zoom in an area on the screen, **Right** click and **Drag** a square on the area you want to enlarge.

(3) Progress bar	Show the progress of the file being played. You may move the bar to seek at any location of the track.
(4) Hour Buttons	Select and click to playback the recorded video file on the specific time frame.

The Hour buttons represent the time in 24-hour clock. The blue bar on top of the hour button indicates that there is a recorded video file on that period of time. While the red bar indicates that you are currently viewing the recorded video file.

(5) Playback Control Buttons	**Begin:** Move at the beginning of the recorded video file. **Previous:** Go back to the previous frame. **Slower:** Play the recorded video file at the speed of 1/2x, 1/4x, 1/8x, 1/16x, or 1/32x. **Rewind:** Wind back the recorded video file. **Pause:** Briefly stop playing the recorded video file. **Play:** Play the recorded video file. **Faster:** Play the recorded video file at the speed of 2x, 4x, or 8x, 16x or 32x. **Next:** Go to the next frame. **End:** Go to the end of the recorded video file.

Name	Function
(6) Archive	Select the date on the calendar and the time from 00 to 23 to where to start playing the recorded video file. - **Channel 01~16/Channel 17~32:** Click it to switch between channel group 1~16 and 17 ~32 of recorded data calendar. - **Open File:** To open the recorded file from other direction/storage path. 

The numbers from 00 to 23 represent the time in 24-hour clock. The numbers from 01 to 16 represent the camera ID. The blue colored column indicates that there is a recorded video file on that period of time. While the red colored column indicates on where to start playing the recorded video file.

(7) Preview	Switch to Preview mode.
(8) Playback	Switch to Playback mode. This allows you to view the recorded video file.
(9) Status bar	Display the recorded date, time and play speed.
(10) Camera ID	Show the number of cameras that are being viewed. When you are in single screen mode, click the camera ID number to switch and view other camera.
(11) Export	**Snapshot:** Capture and save the screen shot either in *.jpg or *.bmp format.
(12) Full screen	View in Playback-compact mode. To return, press the right button of the mouse or **ESC** on the keyboard. When you switch to full screen in multiple-screen mode, **Left** click to toggle to only display one of the video in the multiple-screen mode or all.
(13) Event Log	Show the record of activities that take place in the system
(14) Audio	Enable/disable volume
(15) De-interlace	To enhance the video quality. Set the de-interlace mode to #1, if you are capturing motionless picture and select #2, if it captures lots of movement.

6.3.3 Familiarizing the Buttons in Download and Playback

Name	Function
(1) Exit	To close the application.
(2) Progress bar	Show the progress of the file being played. You may move the bar to seek at any location of the track.
(3) Playback Control Buttons	**Begin:** Move at the beginning of the recorded video file. **Previous:** Go back to the previous frame. **Slower:** Play the recorded video file at the speed of 1/2x, 1/4x, or 1/8x. **Rewind:** Wind back the recorded video file. **Pause:** Briefly stop playing the recorded video file. **Play:** Play the recorded video file. **Faster:** Play the recorded video file at the speed of 2x, 4x, or 8x, 16x or 32x. **Next:** Go to the next frame. **End:** Go to the end of the recorded video file.
(4) Status bar	Display the recorded date, time and play speed.
(5) Language	Customize the system to display the tool tips and dialogs based on the selected language. By default the language is in English.
(6) Export	Export includes Snapshot, Print, and Output Video Clip function. ■ **Snapshot:** Capture and save the screen shot either in *.jpg or *.bmp format. ■ **Print:** Print the screen shot. ■ **Output Video Clip:** Save the segmented file in *.mpg, *.avi, or *.dvr format (see also Chapter 6.3.1.1).
(7) Segment	Keep a portion of the recorded video you want (see also Chapter 6.3.1.1).
(8) Full screen	View in Playback-compact mode. To return, press the right button of the mouse or **ESC** on the keyboard. When you switch to full screen in multiple-screen mode, **Left** click to toggle to only display one of the video in the multiple-screen mode or all.
(9) Visual Search	Search from a specific camera by Date, Hour, Minute, 10 Seconds and Second. (See also Chapter 4.3.5).
(10) Audio	Enable/disable volume

Name	Function
(11) De-interlace	To enhance the video quality. Set the de-interlace mode to #1, if you are capturing motionless picture and select #2, if it captures lots of movement.

Chapter 7 Using Mobile Device to Access DVR Server

7.1 Using PDAViewer to Access DVR Server

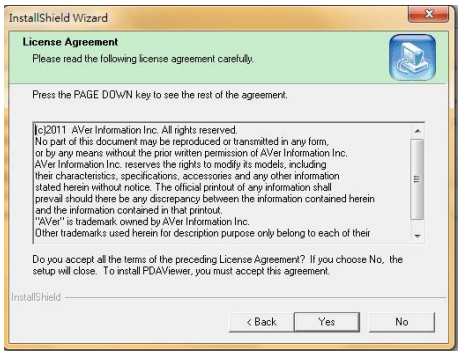
Users can also use a PDA to access the DVR through Internet. Make sure your PDA support IE browser and is connected to the internet. To use this feature, you need to install the PDAViewer software either thru ActiveSync connection or download it from the internet. Please check if your PDA meets the 2 requirements below.

OS: MS Windows CE 4.0, PocketPC 2002/2003, Mobile 5 PDA version
CPU: ARM architecture

7.1.1 To Install PDAViewer thru ActiveSync

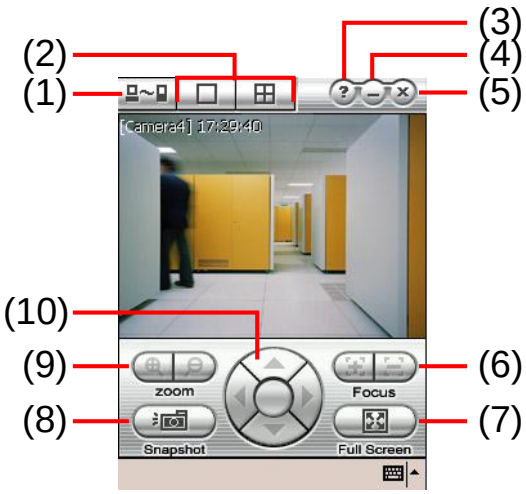
1. Connect your PDA to your PC and make sure the PC and PDA is synchronized. Place the CD into the CD-ROM drive then click **Utilise** and select the **PDAViewer** fold and click **setup.exe** to install the PDAViewer program. And follow the on screen instructions.

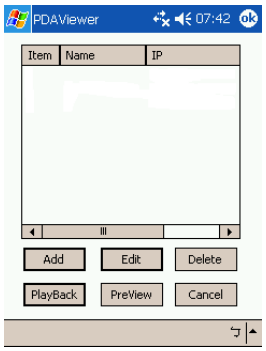
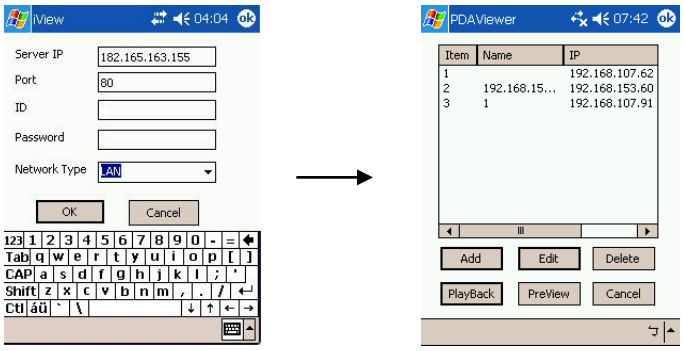
2. Click **Next** to continue.
3. Read the license agreement and click **Yes** to accept all the terms. The system will then automatically install the application.



7.1.2 To Use the PDAViewer

1. Run the **PDAViewer** on your PDA.
2. Familiarizing the PDAViewer buttons.

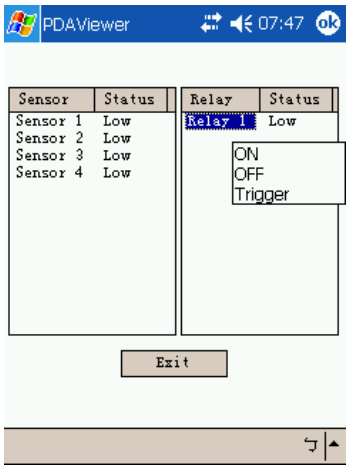


Name	Function
(1) Connect	Hook up to the DVR server. Make sure you are connected to internet. When the iView screen appears, click Add to add DVR server.  Enter the server IP, port, user ID, password and select the connection type. Then, click **OK**.  User can playback the recorded video from remote DVR server in PDAViewer.(see also Chapter 7.1.3)
(2) Split Screen Mode	Select between 2 screen display types. It also allows you to switch and view different camera number or channels.
(3) About	Display the PDAViewer software version.
(4) Minimize	Reduce the size to taskbar.
(5) Exit	Close the PDAViewer.
(6) Focus	Adjust the focus of PTZ camera to produce clear image.
(7) Full Screen	Use the entire screen to only display the video.
(8) Snapshot	Capture and save the screen shot in *.bmp format.
(9) Zoom	Zoom in and out the PTZ camera image.
(10) Direction buttons	Adjust and position the focal point of the PTZ camera.

3. To change the video quality, enable/disable audio, and select to display different camera, tap on the video screen longer the pop-up menu will appear.

4. User also can view and change status of I/O devices.
5. On the preview screen, tap on video screen longer the pop up menu will appear.
6. Select the Remote IO.

7. The sensor and relay devices will list as below:

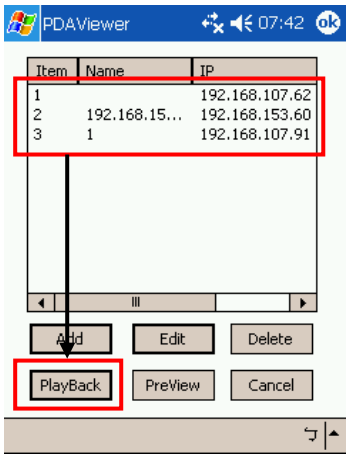


8. User can change the relay status. Select the relay and tap on video screen longer the popup menu will appear, and then, select the status (ON, OFF, Tigger)

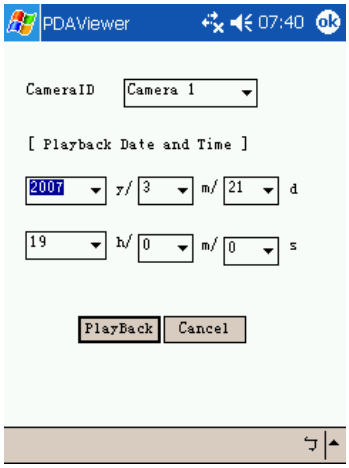
7.1.3 To Playback in PDAViewer

1. Run the **PDAViewer** in the Programs.
2. Hook up to the DVR server.
3. Click **Connect** icon and select the DVR server

4. Click **Playback** to enter playback option screen



5. Select the **camera**, **data**, and **time**
6. Click **Playback** to start playing the recorded video



7.2 Using JavaViewer to Access DVR Server

Using the mobile phone within Symbian Smart Phone OS or Java MIDP 2.0 above to access the DVR through Internet. To use this feature, you need to install the JAVA Viewer program that it can be downloading it from the DVR server through the internet.

7.2.1 To install JavaViewer from the DVR Server

1. Open the web browser and enter the DVR server IP (http://DVR server IP: port/Java-Viewer.html). Then click **Connect**.
2. When the Download screen appears, select **Java-Viewer.jad** and download it to your mobile phone.
3. After the installation, the JavaViewer will be in your mobile phone system. To find the JavaViewer program where is located, please refer to your mobile phone user's manual.

7.2.2 To Use the JavaViewer

1. Run the JavaViewer program.

2. Enter the DVR IP address, port number, user ID, and password. Please refer to your DVR server setting for that information.

3. And then, select the Connect to connect to DVR server.

4. Click **Yes** to accept the data from DVR server.

5. When connection is success, you will see the camera video on the screen.

6. To switch to different camera view, select menu and select the channel.

7. The JavaViewer support PTZ control function. If the camera has enabled PTZ function, the camera name has a word “PTZ”. Using button 2 to move PTZ camera up, 8 to move down, 4 to move to left, 6 to move to right, 7 to zoom in, 9 to zoom out, 1 to focus in, and 3 to focus out. User also can refer to **Help** file for detail function control key. Select **menu** and go the way down to select the **Help** file.

Chapter 8 Using the Web Tools

The bundled Web Tools includes Dispatch Server, Remote Backup, and Remote Setup program. To install Web Tools, place the CD into the CD-ROM drive then click **Install Web Tool**. In selection window, user can select the application(Rmote iSetup, Remote iBackup) to install.

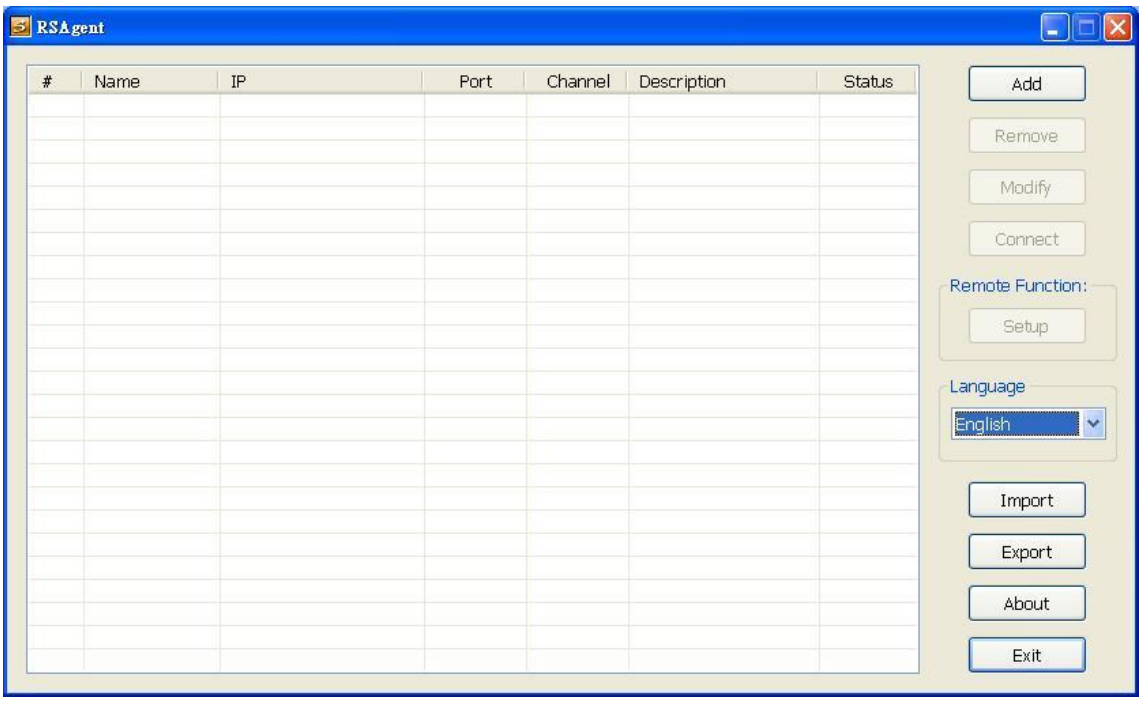
8.1 Remote iSetup

Remote iSetup is a tool for configuring DVR server from remote site. To install Remote Setup application, insert the Installation CD into CD-ROM drive and click **Install Web Tools** and select **Remote iSetup** to install. After installation, click

to start the Remote iSetup application.

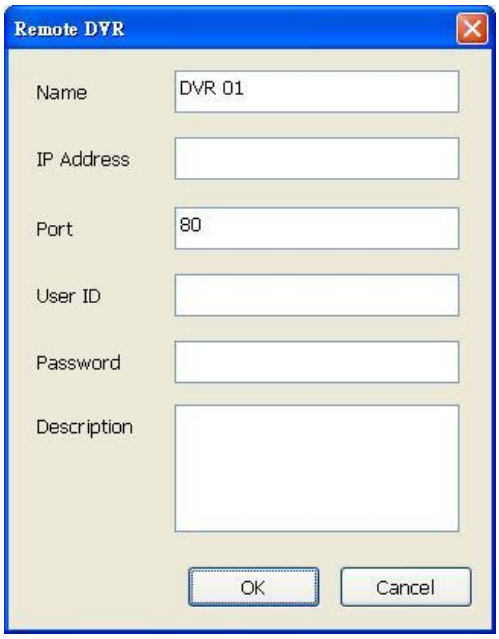
8.1.1 To Add DVR server

User need to add a DVR server and make connection in order to setup remote DVR server.



1. Click **Add**
2. In Edit DVR windows, fill in the following items:

- **Name:** give a name for remote DVR server for easy managing
- **IP:** fill in remote DVR server's IP address
- **Port:** the port use to connect to remote DVR server. The port number is same the PCviewer port on the remote DVR server. The default is 80.
- **User ID:** fill in the remote DVR server's login account
- **Password:** fill in the remote DVR server's login password
- **Description:** fill in a short description for the remote DVR server



3. Click **OK** to complete adding remote DVR server.
4. The added DVR server will be listed and auto connects to DVR server.
5. Once the connecting is success, user can start to configure DVR server.
6. When connection is lost, click **Reconnect** to connect again.
7. To modify or delete the added DVR server, select the DVR server from listing and click **Modify** to change the setting and click **Delete** to remove the DVR server.
8. User also can import the setting by clicking **Import** button. To save the setting to local hard disk, click **Export** button.

8.1.2 To Setup Remote System Setting

The setting here applies to Remote DVR only. Please refer to Chapter 6.1.3.

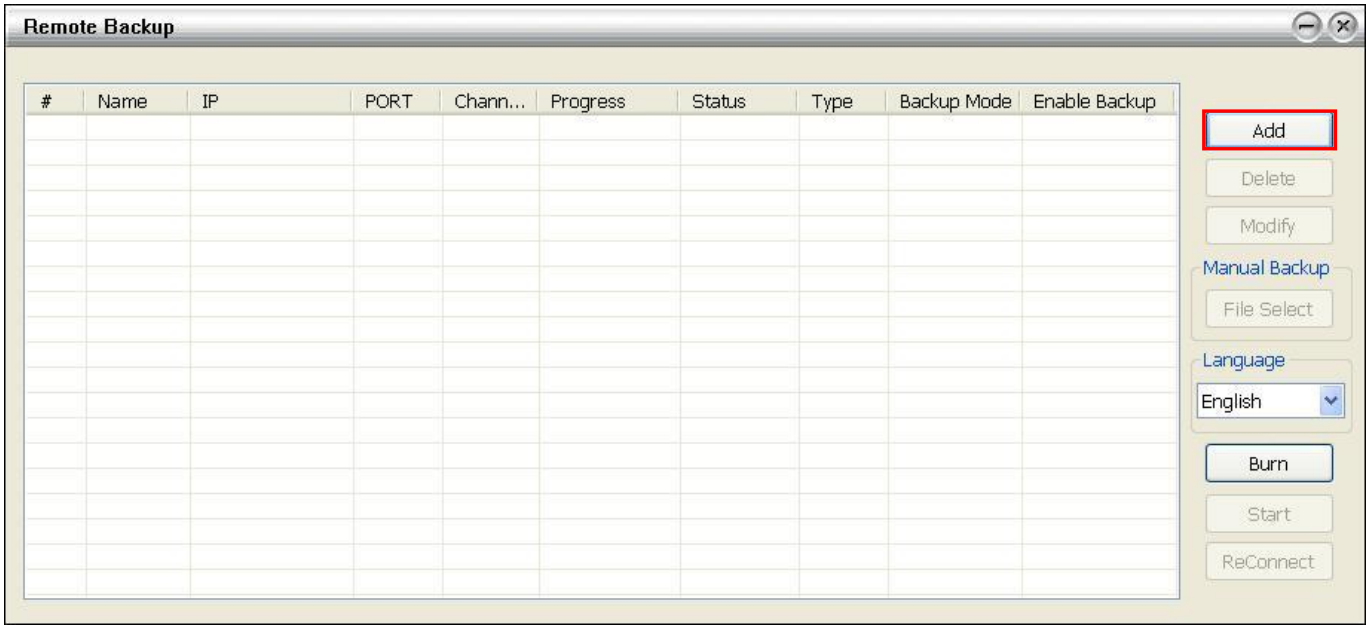
8.2 Remote iBackup

Remote Backup is purely for backing up the *.dvr file from the DVR sever. You can select between Auto Backup and Manual Backup. Auto Backup continuously archives one hour of the recorded data at a time, starting from the specified date. As for Manual Backup, it only archives the recorded data of selected date.

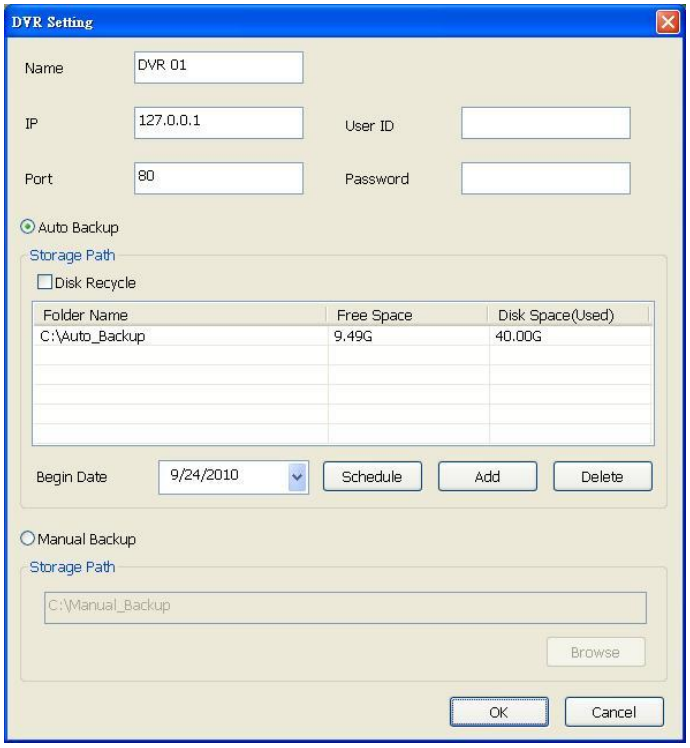
To back up the data, you must have at least 2G hard disk space.

8.2.1 To back up the recoded data from the DVR server

1. Make sure you are connected to the internet.
2. Click **Start** >> **Program** >> **DVR** >> **Web Tool** >> **Remote iBackup**
3. To add the DVR server, click **Add**.



4. In the Add New DVR windows, enter the Name, IP, user ID, and password.



5. Select the Backup mode:

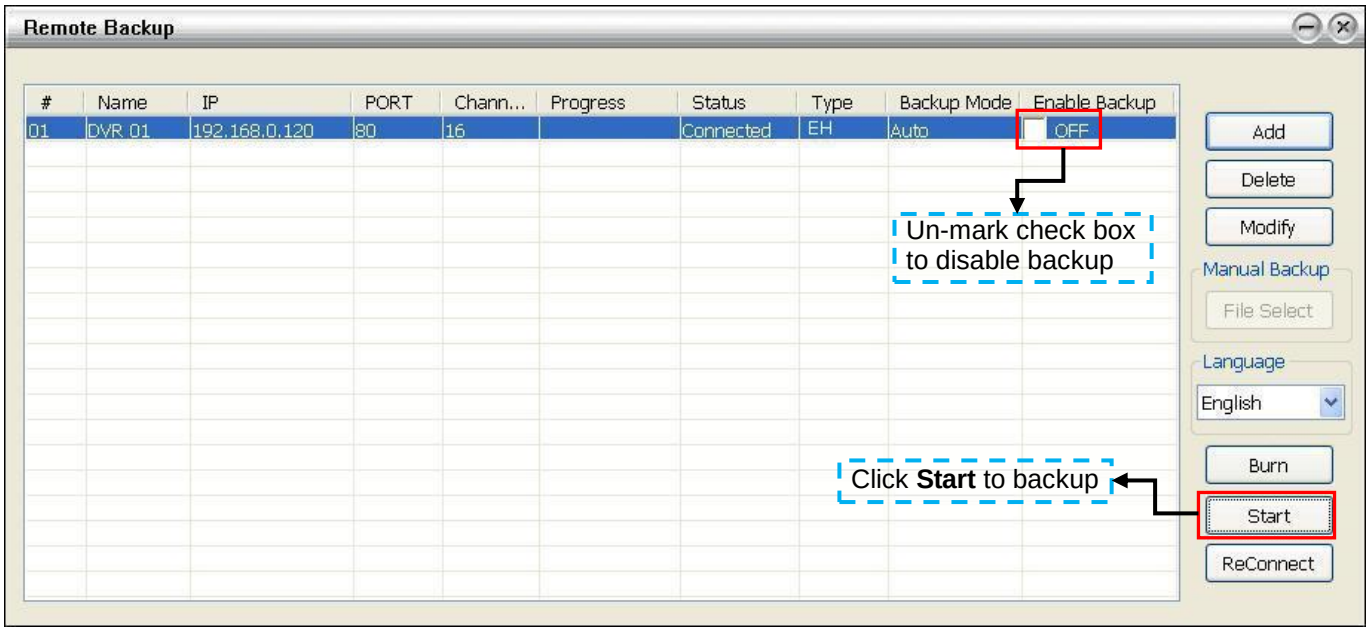
   Auto Backup mode: the backup will automatically execute when the setup is completed

   - In Begin Date drop down calendar, select the date from where to start
   - Click **Add** to set the storage path.
   - Click **Delete** to remove the selected storage path.
   - Click **Schedule** to select/unselect the time you want to backup. The red block turns white when it is unselected.
   - Enable/disable **Disk Recycle** check box, to automatically overwrite the oldest file when there is not enough free space to backup the file.

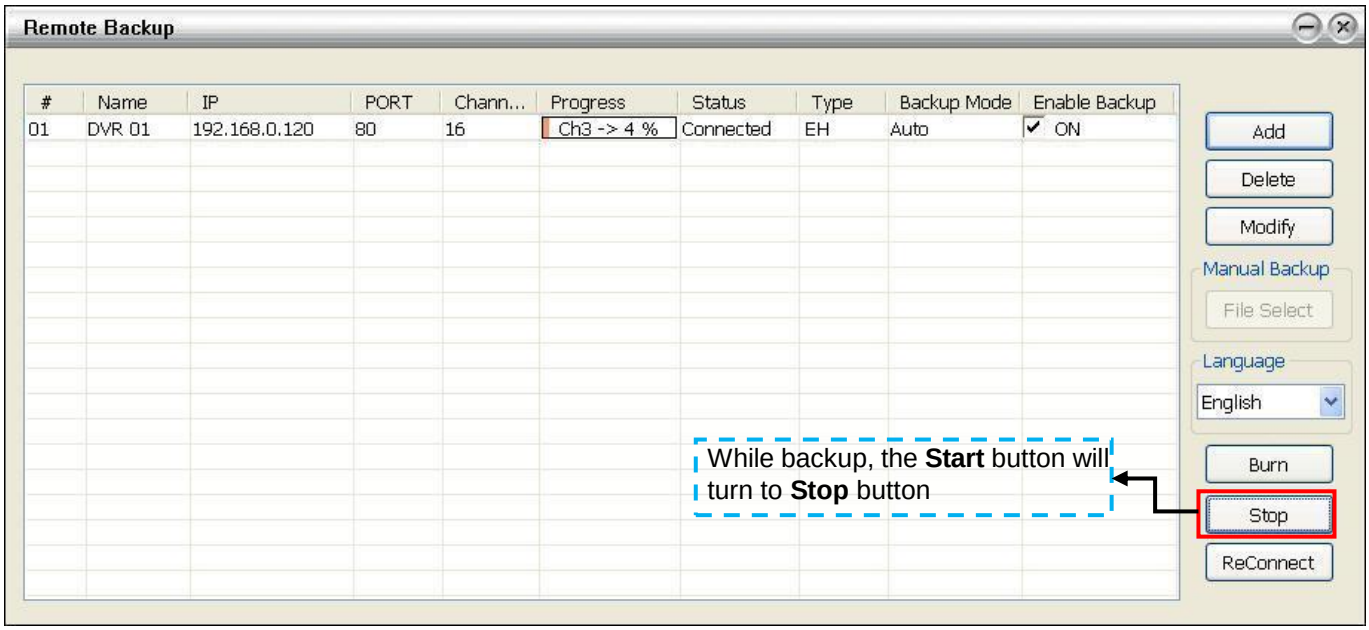
   Manual Backup mode: the backup progress will start when user press the backup button

   - Click **File Select** to choose the date, time and camera you want to back up.
   - Click **Browse** to set the storage path.

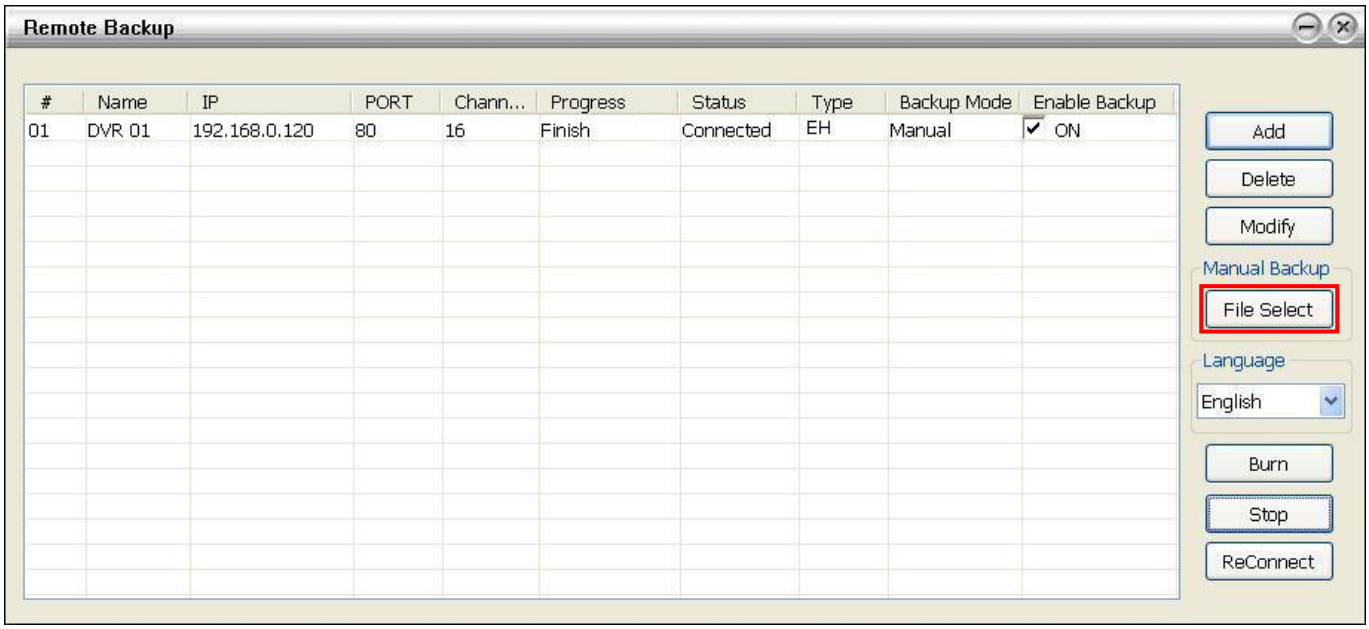
6. Click **OK** to complete the adding DVR server. The added DVR server will display in Remote Backup main windows.



7. Click **Start** to begin backup and click Stop to stop backup progress.



8. For manually backup, click **file select** button and select the DVR to backup.



Appendix A Registering Domain Name

DDNS (Dynamic Domain Name Service) is a data query service mainly used on the Internet for translating domain names into Internet addresses. It allows remote clients to intelligently search dynamic servers without any previous enquiring for servers' Internet addresses.

In order to take advantage of this intelligent service, first register your domain name on the following Web site

I. Register the Domain Name on http://ddns.avers.com.tw

- **User Login**

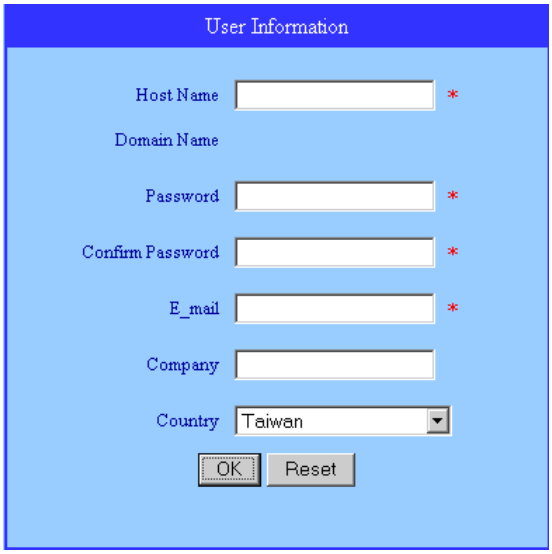
  Browse the website **ddns.avers.com.tw** with Microsoft IE or Netscape Navigator to access the following dialog.

- First input the **MAC Address** in **CD-Key No.** column and select the product name. Then click **OK** to login or **Reset** to clear the previous input.

> To find the MAC address of the DVR, click **Setup** > **Network** in preview mode UI. And then, click **Setting** of the Main Configuration and user should see the **MAC address** in IP Information section.

- **User Information**

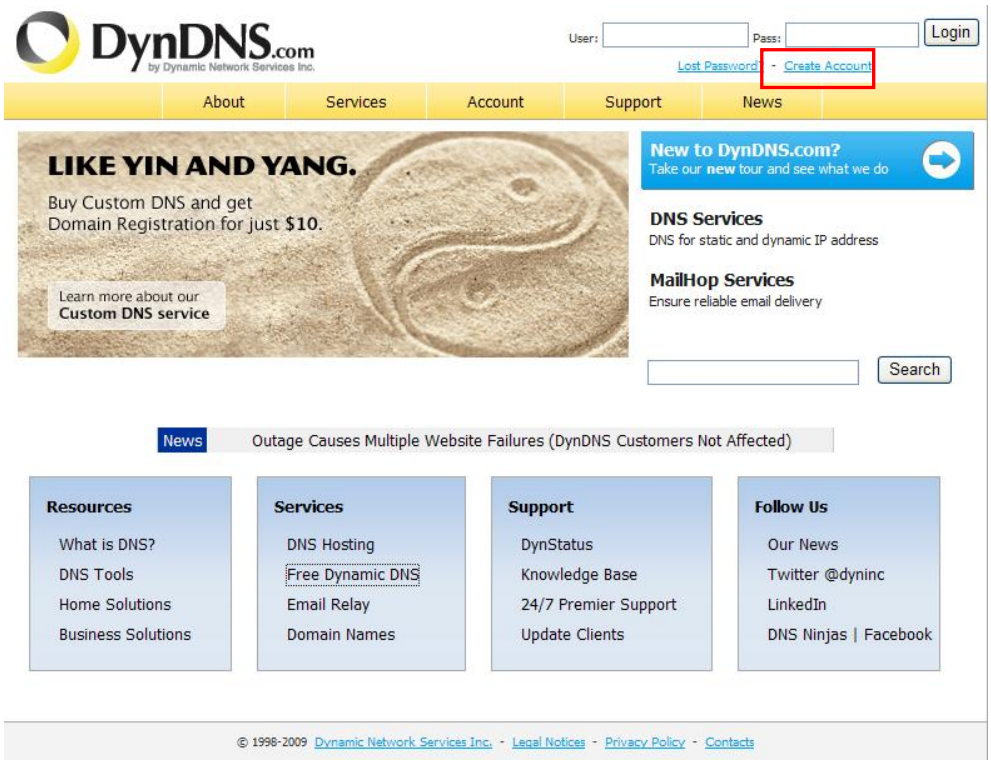
  Please provide the following user information, **Host Name** (user can choose any name he/she likes except the one violence with other users), **Password**, **E-mail**, **Company**, and **Country**. And then, click **OK** to complete the domain name registration.



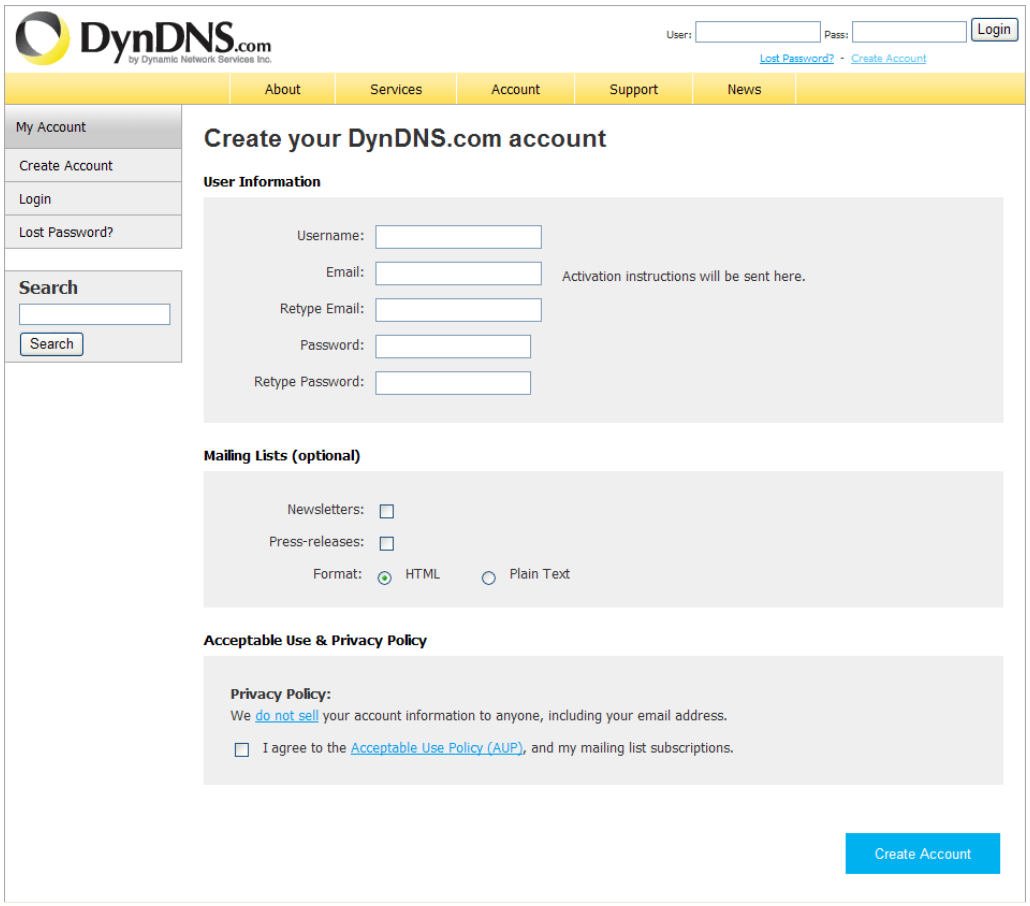
> - Note that Host Name and Domain Name (avers.com) are the replacement for Internet address while a remote client tends to search a dynamic server.
> - Host Name column supports alphabet letters and number only. The maximum character is 15.
> - The password maximum character is 12.

I. Register the Domain Name on http://www.dyndns.com

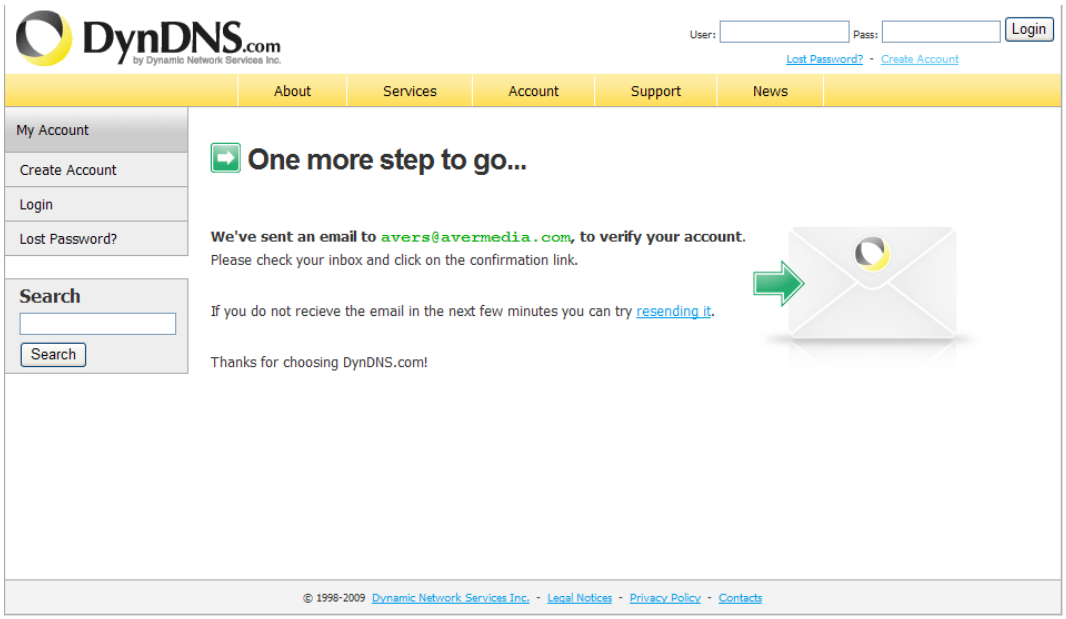
1. Open the browser on your PC and enter the URL http://www.dyndns.com
2. Select the **Create Account** from the main page.



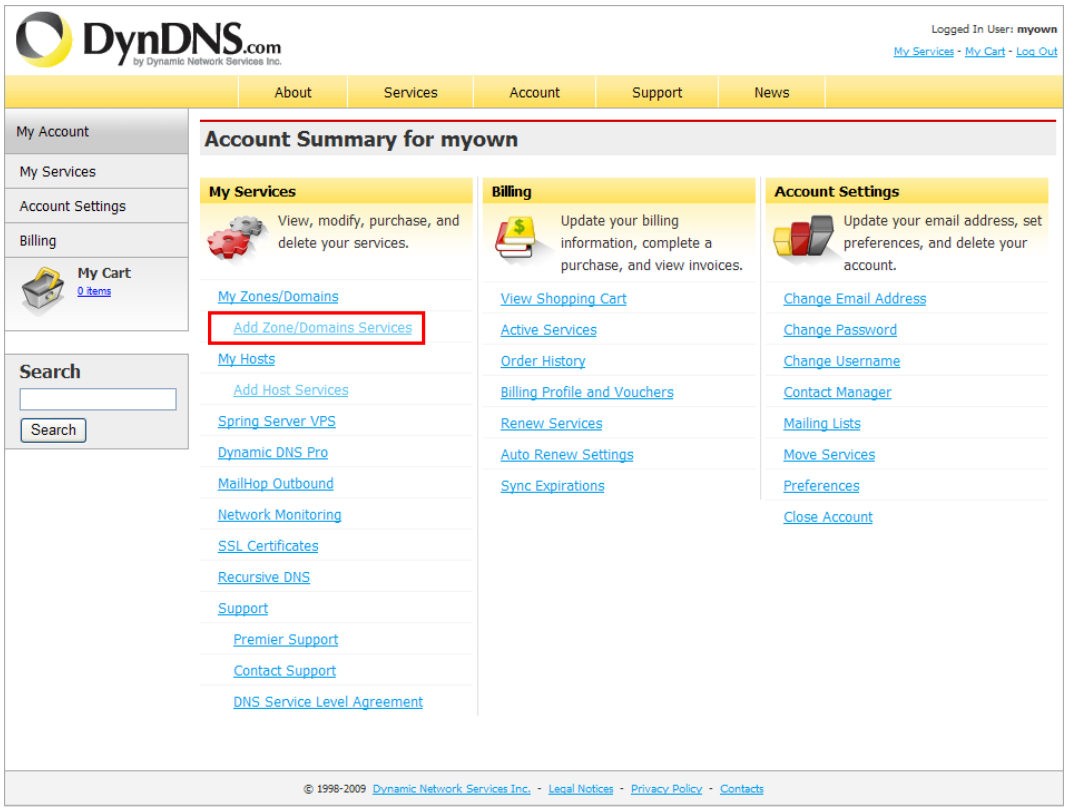
3. Enter the **Username**, **Email**, **Retype Email**, **Password**, **Retype Password**, and read the policy agreement.
4. Click **Create Account**.



5. User need to do the email verify in order to complete the account apply. Go to your mail account that user has used to register the account to find the confirm mail.



6. After account has been confirmed, user can login to your account.



7. Select **Add Zone/Domians Service** to register the domain name.

Appendix B Network Service Port

The following table shows the ports that DVR server uses for certain network service.

	Port#	Variable
Remote Console	5550	Y
PCViewer	80	Y
CM3000	80	Y
Firmware Update	5005	Y
DVR DDNS (Upload / Download)	53/1053	N

WARRANTY NOTICE

LIMITED WARRANTY

AVer Information, Inc. warrants this product to be free of defects resulting from faulty manufacture or components under the following terms:

WARRANTY LENGTH

Labor is warranted for (3) three year from the date of purchase.

Parts are warranted for (2) two year from the date of purchase.

Replacement products will be warranted for the remainder of the one year warranty period or (30) thirty days, whichever is longer

WHO IS PROTECTED

This warranty is enforceable only by the first consumer purchaser

WHAT IS AND IS NOT COVERED

Except as specified below, this warranty covers all defects resulting from faulty manufacturing of this product. The following are not covered by the warranty.

1. Any product on which the serial number has been defaced, modified, or removed
2. Damage, deterioration, or malfunction resulting from:

   Accident, abuse, misuse, neglect, fire, water, lightning, or other acts of nature, commercial or industrial use, unauthorized product modification, or failure to follow instructions included with the product.

   Misapplication of service by someone other than the manufacturer's representative

   Any shipment damages (Claims must be made with carrier)

   Any other cause which does not relate to a product defect
3. Cartons, cases, batteries, cabinets, tapes, or accessories used with product
4. AVer Information Inc. does not warrant that this product will meet your requirements; it is your responsibility to determine the suitability of this product for your purpose

WHAT WE WILL AND WILL NOT PAY FOR

We will pay labor and material expenses for covered items. However, we will not pay for the following:

1. Removal or installation charges
2. Shipping charges
3. Any incidental charges

EXCLUSION OF DAMAGES

THE MANUFACTURER'S SOLE OBLIGATION AND LIABILITY UNDER THIS WARRANTY IS LIMITED TO THE REPAIR OR REPLACEMENT OF A DEFECTIVE PRODUCT AT OUR OPTION. THE MANUFACTURER SHALL NOT, IN ANY EVENT, BE LIABLE TO THE PURCHASER OR ANY THIRD PARTY FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGE (INCLUDING, BUT NOT LIMITED TO, DAMAGES RESULTING FROM INTERRUPTION OF SERVICE AND LOSS OF BUSINESS) OR LIABILITY IN TORT RELATING TO THIS PRODUCT OR RESULTING FROM ITS USE OR POSSESSION.

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There are no other oral or written warranties, expressed or implied, including but not limited to those of merchantability or fitness for a particular purpose. Any implied warranties are limited in duration to one year from the date of purchase

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